

# MEMÒRIA DE RECERCA 2001

Departament de Psiquiatria i  
Psicobiologia Clínica





# ÍNDEX

	<i>Pàgina</i>
<b>1. Presentació</b>	1
<b>2. Professorat i becaris del departament</b>	3
2.1. Subunitat de Psiquiatria	3
2.2. Subunitat de Psicobiologia Clínica	4
<b>3. Projectes d'investigació subvencionats</b>	5
<b>4. Projectes d'innovació subvencionats</b>	13
<b>5. Doctorat</b>	17
<b>6. Llistat de publicacions amb Factor d'Impacte</b>	25
5.1. Subunitat de Psiquiatria	25
5.2. Subunitat de Psicobiologia Clínica	29
<b>7. Resums dels articles amb Factor d'Impacte</b>	33
5.3. Subunitat de Psiquiatria	33
5.4. Subunitat de Psicobiologia Clínica	48
<b>8. Gràfiques de publicacions</b>	63
<b>9. Grups de recerca consolidats II Pla de Recerca de Catalunya</b>	65



## 1. PRESENTACIÓ

En aquesta memòria de recerca es recull la principal activitat investigadora portada a terme a l'any 2001 pels professors i becaris adscrits al nostre departament. Hem continuat amb l'esquema emprat en l'avaluació dels ensenyaments del període 1995-1999 i de la memòria 2000.

Som conscients que hi ha diverses omissions a l'activitat de recerca de tots els membres del departament. Algunes són degudes als criteris de selecció, altres a errors de la informàtica i finalment unes poques a la manca de col·laboració del membres del departament quan se'ls demana informació per a la confecció de la memòria anual.

A la memòria 2001, a més dels projectes de recerca concedits per organismes oficials i els de la Fundació Marató, s'hi ha afegit informació sobre els projectes de recerca i innovació docent subvencionats pel GAIU (Gavinet d'Avaluació i Innovació Universitari). Respecte a l'any anterior cal remarcar un notable increment en els fons de finançament per tot tipus de recerca: bàsica, clínica i docent. Cal esperar-ne uns bons fruits en els propers anys.

En l'àmbit de la productivitat científica, com en les anteriors edicions no hem inclòs els llibres i capítols de llibres, ni les publicacions en revistes sense factor d'impacte en el SSCI o el SCI de l'ISI, ni les comunicacions a congressos. Aquesta informació és molt difícil d'obtenir i no és fàcilment objectivable.

D'altra banda cal mencionar que en molts casos els membres del departament no afilien les seves publicacions al departament, sinó que només fan menció al servei clínic al qual pertanyen o usen altres afilacions tals com els Instituts Clínics o de Recerca dels quals en són membres.

En el cas de la subunitat de Psiquiatria, l'activitat investigadora de la universitat és molt difícil, sinó impossible, de separar de l'activitat hospitalària. Hem inclòs únicament les publicacions en les que hi constava com a mínim una persona vinculada a la Universitat de Barcelona.

De l'anàlisi de les publicacions destacariem que s'ha incrementat el nombre total de publicacions, que s'han aconseguit publicacions en revistes amb molt alt factor d'impacte, tals com Neuroimage o American Journal of Psychiatry. Cal esmentar però, que part de l'increment en el nombre total de publicacions és atribuïble a publicacions en revistes amb

baix factor d'impacte, la qual cosa afecta la qualitat global de la productivitat i fa que la mitjana s'hagi incrementat relativament poc en relació a l'any anterior.

En l'apartat de doctorat, hem afegit els doctorands que han assolit els DEA (Diploma d'Estudis Avançats) en el departament, així com els doctorands matriculats de primer any en el programa interdepartamental "Neurociències". Cal tornar a remarcar la indesitjable desproporció entre alumnes que es matriculen al doctorat i alumnes que assoleixen el grau de doctor.

En la memòria d'enguany, s'agraeix la col·laboració de Pilar Bouzas, Ma José Corral, Carme García, Rosa Pérez i Pere Vendrell en la recollida de dades i elaboració de la present memòria.

La directora del departament

Carme Junqué

Barcelona, octubre 2002

## **2. PROFESSORAT I BECARIS DEL DEPARTAMENT**

### **2.1. Subunitat de Psiquiatria**

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#### **PROFESSORS CATEDRÀTICS D'UNIVERSITAT**

Carles BALLÚS PASCUAL (emèrit)  
Julio VALLEJO RUILOBA

#### **PROFESSORS TITULARS D'UNIVERSITAT**

Josep COROMINAS BUSQUETA  
Tomas De FLORES FORMENTI  
Cristòbal GASTÓ FARRÉ  
Wilma PENZO GIACCA  
Josep TORO TRALLERO  
Manuel VALDÉS MIYAR

#### **PROFESSORS ASSOCIATS**

Miquel BERNARDO ARROYO  
Gloria CANALDA SAHLI  
Mercedes DAURELLA NADAL  
Josep Maria FARRÉ MARTÍ  
Anna Maria MARTINEZ GONZÁLEZ  
Julia OLIVARES GADEA  
Aurora OTERO CAMPRUBI  
Juan de PABLO RABASSO  
Joaquín PUJOL DOMENECH  
Emilio ROJO  
Manuel SALAMERO BARÓ  
Rosa Maria SENDER ROMEO  
Vicente Jose TURÓN GIL

## **2.1. Subunitat de Psicobiologia Clínica**

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### **PROFESSORS CATEDRÀTICS D'UNIVERSITAT**

Carme JUNQUÉ PLAJA  
Miquel SÁNCHEZ-TURET

### **PROFESSORS TITULARS D'UNIVERSITAT**

Helena ALMIRALL LLUCH  
Immaculada C. CLEMENTE LAPENA  
Montserrat COLELL MIMÓ  
Carles ESCERA MICÓ  
Carles GRAU FONOLLOSA  
María Angeles JURADO LUQUE  
Dolors SEGARRA CASTELLS  
Joaquím J. VEÀ BARÓ  
Pere VENDRELL GÓMEZ

### **PROFESSORS ASSOCIATS**

Ana ADÁN PUIG  
Teresa BOGET LLUCIÀ  
Mateo ESCOBAR ALIAGA  
Armando ESTEVEZ GONZÁLEZ  
Fernando FERNÁNDEZ ARANDA  
Eva LLIGOÑA  
Teodor MARCOS BARS  
Montserrat PÉREZ PÁMIES  
María MATARÓ SERRAT  
Gemma PRAT VIGUÉ  
Roser PUEYO BENÍTEZ  
Josep SÁNCHEZ SASTRE  
Josep Maria SERRA GRABULOSA  
Josep M. SUELVES JOANXICH

### **BECARIS DE FORMACIÓ EN INVESTIGACIÓ**

M. del Mar ARIZA GONZÁLEZ (MCYT)  
Silvia CAÑIZARES ALEJOS (DGR)  
M José CORRAL LOPEZ (MCYT)  
Guillermo DIAZ BEHRENS (UB)  
M del Mar MATARIN JIMENEZ (UB)  
Mercedes PÉREZ GOMEZ (DGR)  
Pilar SALGADO PINEDA (UB)  
Chistopher SUMMERFIELD (DGR)  
M. Elena YAGO SOTO (DGR)

### **BECARIS DE TERCER CICLE SUBVENCIONATS PER LA DIVISIÓ**

Esther GONZÁLEZ

## 3. PROJECTES D'INVESTIGACIÓ SUBVENCIONATS

<b>Títol del projecte</b>	<i>Consecuencias neuropsicológicas a largo plazo de las asfixias perinatales. Relación entre las lesiones cerebrales evidenciadas por imágenes de resonancia magnética y los déficits cognitivos</i>
<b>Referència</b>	PM98-0192
<b>Data d'inici</b>	01/08/1999
<b>Data finalització</b>	01/08/2002
<b>Entitat finançadora</b>	MEC
<b>Import</b>	1.581.000 Pts.
<b>Investigador Principal</b>	C. Junqué
<b>Membres del departament que hi participen</b>	W. Penzo, P. Vendrell, J. Toro, M.D. Segarra
<b>Títol del projecte</b>	<i>Ajuts per donar suport als grups de recerca consolidats</i>
<b>Referència</b>	99SGR-81
<b>Data d'inici</b>	01/01/1998
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	CUR
<b>Import</b>	3.000.000 Pts.
<b>Investigador Principal</b>	C. Junqué
<b>Membres del departament que hi participen</b>	M. Sánchez-Turet, P. Vendrell, I. Clemente, H. Almirall, A. Jurado, J.M. Serra, T. Marcos, M. Salamero, J. Massana
<b>Títol del projecte</b>	<i>Efectos de la risperidona en el metabolismo cerebral regional medido mediante espectroscopia por resonancia magnética en pacientes esquizofrénicos</i>
<b>Referència</b>	00/0233
<b>Data d'inici</b>	01/01/2000
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	Instituto de Salud Carlos III, FIS
<b>Import</b>	2.884.000 Pts.
<b>Investigador Principal</b>	M. Salamero
<b>Membres del departament que hi participen</b>	C. Junqué, J. Massana, J.M. Mercader, S. Cañizares
<b>Títol del projecte</b>	<i>Marcadores psicobiológicos de vulnerabilidad al alcoholismo</i>
<b>Referència</b>	PM99-0174-C02-01
<b>Data d'inici</b>	22/09/2000
<b>Data finalització</b>	22/09/2003
<b>Entitat finançadora</b>	CICYT

<b>Import</b>	2.690.000 Pts.
<b>Investigador Principal</b>	M. Sánchez-Turet
<b>Membres del departament que hi participen</b>	A. Adan, I. Clemente
<b>Títol del projecte</b>	<i>Caracterización de alteraciones atencionales mediante potenciales evocados en niños con trastorno por déficit de atención e hiperactividad (TDAH)</i>
<b>Referència</b>	PM99-0167
<b>Data d'inici</b>	22/09/2000
<b>Data finalització</b>	22/09/2003
<b>Entitat finançadora</b>	DGES, Area de Salud
<b>Import</b>	4.285.000 Pts.
<b>Investigador Principal</b>	C. Escera
<b>Membres del departament que hi participen</b>	C. Grau
<b>Títol del projecte</b>	<i>Memoria sensorial auditiva para patrones abstractos: estudio con potenciales evocados</i>
<b>Referència</b>	BSO2000-0679
<b>Data d'inici</b>	23/12/2000
<b>Data finalització</b>	23/12/2003
<b>Entitat finançadora</b>	CICYT
<b>Import</b>	5.000.000 pts.
<b>Investigador Principal</b>	C. Grau
<b>Membres del departament que hi participen</b>	C. Escera
<b>Títol del projecte</b>	<i>Marcadores genéticos individuales como predictores de la respuesta al tratamiento farmacológico en la depresión mayor: análisis genético combinado de los polimorfismos CYP2D6 y CYP219 y del gen Sert</i>
<b>Referència</b>	00/0613
<b>Data d'inici</b>	01/01/2000
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	FIS. Ministerio de Sanidad y Consumo
<b>Import</b>	5.040.000 Pts.
<b>Investigador Principal</b>	C. Gastó
<b>Membres del departament que hi participen</b>	-

<b>Títol del projecte</b>	<i>Estudi de l'activitat cerebral mitjançant ressonància magnètica funcional</i>
<b>Referència</b>	2000XT 00094
<b>Data d'inici</b>	2000
<b>Data finalització</b>	2002
<b>Entitat finançadora</b>	Direcció General de Recerca (Generalitat de Catalunya)
<b>Import</b>	800.000 Pts.
<b>Investigador Principal</b>	C. Junqué
<b>Membres del departament que hi participen</b>	Tot el grup de Neuropsicologia
<b>Títol del projecte</b>	<i>Ajuts a grups consolidats. Grup de Neuropsicologia</i>
<b>Referència</b>	2001SGR 00139
<b>Data d'inici</b>	2001
<b>Data finalització</b>	2004
<b>Entitat finançadora</b>	Direcció General de Recerca
<b>Import</b>	10.000.000 Pts.
<b>Investigador Principal</b>	C. Junqué
<b>Membres del departament que hi participen</b>	Tot el grup de Neuropsicologia
<b>Títol del projecte</b>	<i>Factores predictores de mejoría en bulimia nerviosa</i>
<b>Referència</b>	00/285
<b>Data d'inici</b>	01/01/2000
<b>Data finalització</b>	31/12/2002
<b>Entitat finançadora</b>	FIS. Ministerio de Sanidad y Consumo
<b>Import</b>	650.000 pts.
<b>Investigador Principal</b>	F.Fernández
<b>Membres del departament que hi participen</b>	V. Turón
<b>Títol del projecte</b>	<i>The role of social,genetic and environmental factors in healthy eating:a multicentre analysis of eating disorders and obesity</i>
<b>Referència</b>	QLK1-1999-916
<b>Data d'inici</b>	01/03/2000
<b>Data finalització</b>	01/03/2003
<b>Entitat finançadora</b>	Unión Europea (UE)
<b>Import</b>	48.411.338 Pts. (Grup espanyol)
<b>Investigador Principal</b>	F.Fernández (Grup espanyol)

<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Trastorno obsesivo-compulsivo y trastornos de la alimentación: estudio comparativo de factores psicopatológicos, psicológicos y genéticos.</i>
<b>Referència</b>	01/1558
<b>Data d'inici</b>	01/01/2001
<b>Data de finalització</b>	31/12/2003
<b>Entitat finançadora</b>	FIS. Ministerio de Sanidad y Consumo
<b>Import</b>	10.450.000 pts.
<b>Investigador Principal</b>	J. Vallejo Ruiloba
<b>Membres del departament que hi participen</b>	F. Fernández Aranda, J.M. Menchon Magriña, V. Turón Gil
<b>Títol del projecte</b>	<i>Marcadores neuropsicológicos precoces de la enfermedad de Alzheimer</i>
<b>Referència</b>	024/97
<b>Data d'inici</b>	02/12/1997
<b>Data finalització</b>	02/12/2002
<b>Entitat finançadora</b>	Fundació "La Caixa-Marató TV3"
<b>Import</b>	10.857.150 Pts.
<b>Investigador Principal</b>	C. García-Sánchez
<b>Membres del departament que hi participen</b>	A. Estévez González
<b>Títol del projecte</b>	<i>Análisis de los contenidos oníricos en pacientes con trastornos de conducta en la fase REM</i>
<b>Referència</b>	00/0433
<b>Data d'inici</b>	01/01/2000
<b>Data finalització</b>	30/12/2001
<b>Entitat finançadora</b>	FIS. Ministerio de Sanidad y Consumo
<b>Import</b>	4.950.000 Pts.
<b>Investigador Principal</b>	Joan de Pablo
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Protocolo de uso tutelado de los tratamientos no farmacológicos de la enfermedad de Parkinson</i>
<b>Referència</b>	STPY 1202/99
<b>Data d'inici</b>	01/02/1999
<b>Data finalització</b>	No determinada
<b>Entitat finançadora</b>	Agencia de Evaluación de Tecnologías Sanitarias de Andalucía (AETSA)-Convenio Mº de Sanidad y Consumo-

<b>Import</b>	Instituto de Salud Carlos III no determinat
<b>Investigador principal</b>	V. Sarmiento González-Nieto
<b>Membres del departament que hi participen</b>	A. Estévez González
<b>Títol del projecte</b>	<i>Estudi multidisciplinari de la utilitat de la determinació de l'àcid homovanílic plasmàtic com a predictor de recaiguda en pacients esquizofrènics</i>
<b>Referència</b>	011110
<b>Data d'inici</b>	01/01/2002
<b>Data finalització</b>	31/12/2004
<b>Entitat finançadora</b>	Marató TV3
<b>Import</b>	11.365.350 Pts.
<b>Investigador Principal</b>	Miquel Bernardo Arroyo
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Eficàcia de la rehabilitació neuropsicològica en l'esquizofrènia crònica: repercussions sobre les variables clíniques, l'activitat cerebral i el funcionament psicosocial.</i>
<b>Referència</b>	N-2001Tv 1510-0
<b>Data d'inici</b>	05/02/2002
<b>Data finalització</b>	05/02/2005
<b>Entitat finançadora</b>	Marató TV3
<b>Import</b>	9.060.000 Pts.
<b>Investigador Principal</b>	Teresa Boget Lluçà
<b>Membres del departament que hi participen</b>	M. Salamero Baró
<b>Títol del projecte</b>	<i>Factors neuropsicològics específics en la depressió senil per a l'estudi pronòstic de la malaltia: funcions executives i Spect.</i>
<b>Referència</b>	01/2210
<b>Data d'inici</b>	01/01/2002
<b>Data finalització</b>	31/12/2004
<b>Entitat finançadora</b>	Marató TV3
<b>Import</b>	6.548.700 Pts.
<b>Investigador Principal</b>	Teodor Marcos Bars
<b>Membres del departament</b>	M. Salamero, C. Gastó, M.J. Portella, R. Pueyo
<b>Títol del projecte</b>	<i>Etiopatogènia del trastorn obsessiu-compulsiu: estudi genètic, neurofisiològic, neuropsicològic i de neuroimatge estructural.</i>
<b>Referència</b>	no determinada

<b>Data d'inici</b>	no determinada
<b>Data finalització</b>	no determinada
<b>Entitat finançadora</b>	Marató TV3
<b>Import</b>	17.671.651 Pts.
<b>Investigador Principal</b>	Josep Manuel Menchón Magriña
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Procesamiento de la disparidad binocular</i>
<b>Referència</b>	BSO2001-3639
<b>Data d'inici</b>	09/11/2001
<b>Data finalització</b>	31/12/2004
<b>Entitat finançadora</b>	Ministerio de Ciencia y Tecnología-Plan Nacional I+D
<b>Import</b>	5.412.000 Pts.
<b>Investigador Principal</b>	J.A. Aznar
<b>Membres del departament que hi participen</b>	H. Almirall
<b>Títol del projecte</b>	<i>Identificación de parámetros ecológicos relevantes para la viabilidad de poblaciones de Alouatta palliata en habitat fragmentado: Aplicaciones a la conservación de los primates mexicanos.</i>
<b>Referència</b>	PB98-1270
<b>Data d'inici</b>	30/12/1999
<b>Data finalització</b>	30/12/2002
<b>Entitat finançadora</b>	Ministerio de Educación y Cultura
<b>Import</b>	2.960.000 Pts.
<b>Investigador Principal</b>	Joaquin J. Veà Baró
<b>Membres del departament que hi participen</b>	Mateo Escobar Aliaga
<b>Títol del projecte</b>	<i>Mecanismos cerebrales de la función auditiva superior en humans.</i>
<b>Referència</b>	00ACES-74
<b>Data d'inici</b>	09/02/2001
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	Direcció General de Recerca (Generalitat de Catalunya)
<b>Import</b>	800.000 Pts.
<b>Investigador Principal</b>	Carles Escera Micó
<b>Membres del departament que hi participen</b>	Cap

<b>Títol del projecte</b>	<i>Mecanismos cerebrales de la función auditiva superior en humanos.</i>
<b>Referència</b>	AE00-0358
<b>Data d'inici</b>	01/02/2001
<b>Data finalització</b>	30/10/2001
<b>Entitat finançadora</b>	Ministerio de Ciencia y Tecnología
<b>Import</b>	1.933.000 Pts.
<b>Investigador Principal</b>	Carles Escera Micó
<b>Membres del departament que hi participen</b>	E. Yago
<b>Títol del projecte</b>	<i>Psicofisiologia cognitiva y neurodinàmica clínica.</i>
<b>Referència</b>	00-XT 00021
<b>Data d'inici</b>	23/02/2001
<b>Data finalització</b>	31/12/2002
<b>Entitat finançadora</b>	Direcció General de Recerca (Generalitat de Catalunya)
<b>Import</b>	800.000 Pts.
<b>Investigador Principal</b>	Carles Grau Fonollosa
<b>Membres del departament que hi participen</b>	C. Escera, J. Toro
<b>Títol del projecte</b>	<i>Ajut als grups consolidats de recerca: grup de neurociència cognitiva.</i>
<b>Referència</b>	99SGR-264
<b>Data d'inici</b>	14/04/1999
<b>Data finalització</b>	31/10/2001
<b>Entitat finançadora</b>	Direcció General de Recerca (Generalitat de Catalunya)
<b>Import</b>	1.600.000 Pts.
<b>Investigador Principal</b>	Carles Grau Fonollosa
<b>Membres del departament que hi participen</b>	C. Escera, J. Toro, M.J. Corral
<b>Títol del projecte</b>	<i>Influencia parenteral en el desarrollo de factores de riesgo para el consumo de drogas en hijos de drogodependiente en tratamiento.</i>
<b>Referència</b>	PNSD
<b>Data d'inici</b>	01/01/2001
<b>Data finalització</b>	30/09/2001
<b>Entitat finançadora</b>	Ministerio del Interior. Delegación del Gobierno para el Plan Nacional sobre Drogas
<b>Import</b>	2.000.000 Pts.
<b>Investigador Principal</b>	Miquel Sánchez-Turet

<b>Membres del departament</b>	-
<b>Títol del projecte</b>	<i>Xarxa temàtica en Drogodependències.</i>
<b>Referència</b>	00XT 00022
<b>Data d'inici</b>	23/02/2001
<b>Data finalització</b>	31/10/2002
<b>Entitat finançadora</b>	Direcció General de Recerca (Generalitat de Catalunya)
<b>Import</b>	800.000 Pts.
<b>Investigador Principal</b>	Miquel Sánchez-Turet
<b>Membres del departament que hi participen</b>	A. Adan, C. Clemente, J.M. Suelves
<b>Títol del projecte</b>	<i>Auto-reconocimiento ante el espejo en distintas especies de primates no humanos.</i>
<b>Referència</b>	PB96-0177
<b>Data d'inici</b>	01/12/1997
<b>Data finalització</b>	01/12/2000 (projecte prorrogat fins 01/12/2001)
<b>Entitat finançadora</b>	Ministerio de Ciencia y Tecnología
<b>Import</b>	2.250.000 Pts.
<b>Investigador Principal</b>	Montserrat Colell Mimó
<b>Membres del departament que hi participen</b>	Ma. Dolors Segarra Castells
<b>Títol del projecte</b>	<i>Reconeixement de la reserva de fauna de Conkovati (Congo-Brazzaville).</i>
<b>Referència</b>	ACES00-44
<b>Data d'inici</b>	17/10/2000
<b>Data finalització</b>	30/03/2001
<b>Entitat finançadora</b>	Direcció General de Recerca (Generalitat de Catalunya)
<b>Import</b>	500.000 Pts.
<b>Investigador Principal</b>	Joaquim J. Veà Baró
<b>Membres del departament que hi participen</b>	M. Colell Mimó, G. Díaz Behrens

## 4. PROJECTES D'INNOVACIÓ DOCENT SUBVENCIONATS

<b>Títol del projecte</b>	<i>Psicobiologia del son</i>
<b>Referència</b>	10/IV/MM-01/33 SEGA
<b>Data d'inici</b>	04/10/2001
<b>Data finalització</b>	04/10/2002
<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	275.000 Pts.
<b>Investigador Principal</b>	M. Dolors Segarra Castells
<b>Membres del departament que hi participen</b>	Josep M Serra, Roser Pueyo
<b>Títol del projecte</b>	<i>Formació d'un grup d'experts en l'avaluació dels coneixements en medicina mitjançant proves d'elecció múltiple (PEM)</i>
<b>Referència</b>	10/IV/FP-Av/02/PENZ
<b>Data d'inici</b>	11/06/2001
<b>Data finalització</b>	31/12/2002
<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	350.000 Pts.
<b>Investigador Principal</b>	Wilma Penzo Giacca
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Requisits i factors de risc en l'alumnat de nou ingrés en Medicina. Caracterització segons la procedència.</i>
<b>Referència</b>	10/IV/AV-Er/09/PENZ
<b>Data d'inici</b>	11/06/2001
<b>Data finalització</b>	31/12/2002
<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	200.000 Pts.
<b>Investigador Principal</b>	Wilma Penzo Giacca
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Ansietat de l'alumnat davant l'estrès de l'avaluació: un programa de la Facultat de Medicina.</i>
<b>Referència</b>	10/IV/AD-AI/04/SEND
<b>Data d'inici</b>	04/10/2001
<b>Data finalització</b>	04/10/2002

<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	200.000 Pts.
<b>Investigador Principal</b>	Rosa Sender Romeo
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>La observación en el aula como instrumento de evaluación y aprendizaje.</i>
<b>Referència</b>	9/IV/AV-Es/02/SEND
<b>Data d'inici</b>	11/06/2001
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	150.000 Pts.
<b>Investigador Principal</b>	Rosa Sender Romeo
<b>Membres del departament que hi participen</b>	-
<b>Títol del projecte</b>	<i>Disseny de l'assignatura Neuropsicologia Humana en crèdits ECTS.</i>
<b>Referència</b>	10/IV/AD/-Ects/08/JUNQ
<b>Data d'inici</b>	02/07/2001
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	135.000 Pts.
<b>Investigador Principal</b>	C. Junqué Plaja
<b>Membres del departament que hi participen</b>	M.A. Jurado, R. Pueyo, T. Marcos, J.M. Serra, M. Pérez-Pàmies
<b>Títol del projecte</b>	<i>Dissenys interactius on-line de primer nivell. Pràctiques de Neuropsicologia.</i>
<b>Referència</b>	10/IV/MM-01/32/JUNQ
<b>Data d'inici</b>	11/06/2001
<b>Data finalització</b>	31/12/2001
<b>Entitat finançadora</b>	Gabinet d'Avaluació i Innovació Universitària. Universitat de Barcelona
<b>Import</b>	275.000 Pts.
<b>Investigador Principal</b>	C. Junqué Plaja
<b>Membres del departament que hi participen</b>	J.M. Serra, M.A. Jurado, T. Marcos, R. Pueyo, M. Pérez-Pàmies
<b>Títol del projecte</b>	<i>Organització de les sisenes jornades de docència de la Facultat de Medicina</i>

<b>Referència</b>	PID
<b>Data d'inici</b>	<i>no determinada</i>
<b>Data finalització</b>	<i>no determinada</i>
<b>Entitat finançadora</b>	<i>no determinada</i>
<b>Import</b>	<i>no determinada</i>
<b>Investigador Principal</b>	Wilma Penzo
<b>Membres del departament que hi participen</b>	no determinada
<b>Títol del projecte</b>	<i>Propuesta del programa de Atención Psicológica de la Facultad de Medicina: Evaluación de la eficacia del curso impartido en la Facultad a los jóvenes licenciados, en el periodo de preparación del examen para acceder al MIR, sobre estrategias de control de la ansiedad y organización del estudio</i>
<b>Referència</b>	<i>no determinada</i>
<b>Data d'inici</b>	<i>no determinada</i>
<b>Data finalització</b>	<i>no determinada</i>
<b>Entitat finançadora</b>	<i>Divisió Ciències de la Salut</i>
<b>Import</b>	<i>no determinat</i>
<b>Investigador Principal</b>	Rosa Sender
<b>Membres del departament que hi participen</b>	-



## 5. DOCTORAT

### DOCTORAT DE **NEUROBIOLOGIA**

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Alumnes que han obtingut el D.E.A. (Diploma d'Estudis Avançats)

- § M<sup>a</sup> del Mar Ariza González. *Afectació neuropsicològica i recuperació de traumatismes.*  
Tutora: Dra. Carme Junqué i Plaja
- § Summerfield, Christopher. *Resonància magnètica funcional en neurociències.*  
Tutora: Dra. Carme Junqué i Plaja

### DOCTORAT DE **NEUROCIÈNCIES**. Bienni 2001-2002

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Alumnes matriculats

1. Andrés Perpiñà, Susana
2. Carral Bielsa, Vanessa
3. Corbera López, Silvia
4. Dolz Abadia, Montserrat
5. Escartin Martin, Gemma
6. González Tugas, Matías
7. Imaz Gurruchaga, M. Luisa
8. Morer Liñan, Astrid
9. Narberhaus, Ana
10. Pons Villanueva, Alexandre
11. Ramírez Ruíz, Blanca
12. Roure Poch, Pere
13. Santiago Rolanía, Olga
14. Solé Padullés, Cristina
15. Vallejo Blanxart, Gemma

**TESIS DOCTORALS LLEGIDES A L'ANY 2001**

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- § David Bussé Olivé. *Impacto inmunológico y psicológico de la notificación de la serología frente al VIH en población penitenciaria.*  
Director: Dr. T. de Flores
  
- § Roser Cirici Amell. *Evaluación de la eficacia de un programa de entrenamiento en habilidades sociales para personas que padecen esquizofrenia.*  
Directors: Dr. J. Obiols y Dr. C. Ballús
  
- § Montserrat Juncadella Puig. *Recuperació Neuropsicológica de les lesions vasculars subcorticals i relació amb la localització valorada amb Neuroimatge (TC, RM, SPECT).*  
Directora: Dra. C. Junqué
  
- § Cristina Mañeru Zunzarren. *Antecedentes de asfixia perinatal en relación al deterioro neuropsicológico. Análisi cuantificado de resonancia magnética.*  
Directora: Dra. C. Junqué
  
- § Masana Montejo, Guillem. *Metabolisme de la Regió Amígdala-Hipocampal dreta i del Còrtex Prefrontal medial mesurats mitjançant espectroscòpia per ressonància magnètica: Alteracions en el trastorn d'angoixa abans i després del tractament farmacològic.*  
Director: Dr. C. Gastó
  
- § Pifarré Paredero, José *Estudio psicofarmacológico de la enfermedad obsesiva. Medición de potenciales evocados y tiempo de reacción en pacientes con TOC.*  
Director: Dr. J. Vallejo
  
- § Roser Pueyo Benito. *Perfiles neuropsicológicos de la parálisis cerebral espástica y discinética bilateral.*  
Director: Dr. P. Vendrell

## RESUMS DE LES TESIS DOCTORALS

<b>Títol</b>	<i>Impacto inmunológico y psicológico de la notificación de serología VIH en población penitenciaria</i>
<b>Doctorand</b>	David Bussé i Olivé
<b>Director</b>	Dr. Tomas de Flores

**Resum**

**Introducción:** Nuestro estudio ha sido una aportación más al creciente auge en los estudios en psicoimmunología y psicopatología. Se evaluaron los cambios psicoinmunes acontecidos en una población reclusa sometida a un estudio serodiagnóstico frente al VIH. A través de un estudio longitudinal prospectivo a 10 semanas en voluntarios sanos de un Centro Penitenciario con serodiagnóstico desconocido frente al VIH. Se han seguido estos cambios durante 4 semanas en espera de los resultados y durante 6 semanas tras la notificación.

Se ha demostrado claramente que existe un efecto de la notificación diagnóstica del seroestatus sobre el estado psicológico y psicopatológico de los sujetos estudiados. así encontramos una mayor depresión, ansiedad, estrés percibido y diferente reactividad inmune. No evaluamos factores etiopatogénicos, ni neuroendocrinos o psicosociales como podría ser la privación de libertad, aspectos culturales, ambientales y sociológicos. Intervenciones psicoeducacionales y biopsicosociales para detectar y paliar los cambios psicoinmunes observados abren el camino a futuros trabajos de investigación en VIH y psiquiatría.

**Resultados:** De 81 individuos inician el estudio 79 casos y lo finalizan 61. La edad promedio de 31.42 y un 89 % eran blancos caucasianos de origen principalmente español (89%). Predominantemente solteros (45.46 %) y heterosexuales(87.34 %). Alrededor de un 70 % admite prácticas sexuales sin uso de preservativo, un 25 % haber podido estar en contacto con utensilios contaminados y una sexta parte haber utilizado jeringuillas en los últimos seis meses. Casi la mitad (35) admiten no creer tener ningún riesgo. Alrededor de ¾ de la muestra admiten haber abusado de drogas en los últimos seis meses, siendo la vía inyectada en una quinta parte de la muestra. Al inicio del estudio la mayoría de los sujetos estudiados muestran parámetros elevados de estrés emocional, expresado en las escalas de STAI para la ansiedad de estado, Beck de Depresión y escala de estrés percibido y que alrededor de una cuarta parte muestra puntuaciones moderada y severa en la escala de salud general de Goldberg.

Un 19 % de los individuos estudiados testan seropositivos frente a un 81% que testa negativo.

**Conclusiones:** Basándonos en la dimensión biopsicosocial del ser humano y las teorías de adaptación al estrés planteábamos 4 hipótesis que quedan demostradas:

- 1. Notificar el diagnóstico produce cambios emocionales** expresados en las escalas de estrés percibido, ansiedad y depresión. Este estrés aparece ya en la línea de base y en espera de los resultados y mengua conforme los sujetos se adaptan y conocen su seroestatus.
- 2. El sistema inmune también se afecta con la notificación serológica,** observándose una inmunosupresión inicial expresada en poblaciones linfocitarias « helper » totales, cociente CD4/CD8 y en especial en la respuesta de proliferación celular estimulada con PHA.
- 3. El resultado del test supone 2 patrones adaptativos distintos :** la respuesta emocional es **más acusada, lenta e insidiosa** en el grupo de **seropositivos** y **su inmunidad celular** expresada en cocientes CD4/CD8 está afectada por el propio efecto del virus, asimismo la **proliferación mitógena** también presenta un patrón adaptativo con respuesta subnormal tras la notificación de resultados. En **seronegativos** el sufrimiento emocional e inmune **se recupera**
- 4. El estrés inmune y psicológico observado varía en función e parámetros caracteriales y cognoscitivos** que supondrían una mayor « vulnerabilidad » . Un **mayor neuroticismo** expresado en la subescala N del cuestionario EPQ o psicopatología psiquiátrica subyacente (expresado en la escala de Goldberg) supone un mayor estrés y una recuperación más lenta. Se intuyen resultados parciales y no conclusivos en función de otros parámetros de rasgo como la **susceptibilidad al castigo** (escala SC/SR) y la **hostilidad** (escala de Cook y Medley). Los individuos que perciben un riesgo alto de contraer la enfermedad presentan mayor estrés emocional y menor respuesta inmune.

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**Títol** *Evaluación de la eficacia de un programa de entrenamiento en habilidades sociales para personas que padecen esquizofrenia*

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**Doctorand** Roser Cirici Amell

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**Director** Dr. Joan Obiols Llandrich

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### **Resum**

Les persones que pateixen d'esquizofrènia presenten, entre d'altres símptomes, dificultats per a les relacions socials i aïllament. L'entrenament en habilitats socials és una estratègia terapèutica, que s'emmarca dins el model de rehabilitació psicosocial, i que incideix en la millora de la competència social.

**OBJECTIUS GENERALS:** a) comparar l'eficàcia d'un programa combinat d'entrenament en habilitats socials (PEHS) amb el tractament antipsicòtic estàndard, versus el tractament exclusivament antipsicòtic, en la modificació de símptomes esquizofrènics, b) avaluar els efectes de la retirada del PEHS, c) avaluar la repercussió del PEHS en l'entorn familiar del pacient, i d) estudiar la repercussió del PEHS en els costos econòmics assistencials.

**HIPÒTESIS:** a) el tractament combinat serà més eficaç que el tractament antipsicòtic estàndard, b) amb la retirada del PEHS els pacients retornaran al seu estat basal, c) els familiars del grup PEHS disminuiran la sensació de càrrega emocional i el nivell d'estrès, i d) els canvis econòmics seran de major magnitud en el grup PEHS.

**PROCEDIMENT:** Aquest projecte d'investigació és plantejat com un estudi prospectiu per avaluar l'eficàcia d'un programa de rehabilitació psicosocial (PEHS) per a persones amb diagnòstic CIE-10 d'esquizofrènia. El disseny de l'estudi fou un assaig clínic aleatoritzat i controlat. Les proves administrades (PANSS, SBAS, SUMD, CSRI, WAIS, AI-F, SISST) es van aplicar en tres ocasions: pre, post i seguiment als 6 mesos.

**PARTICIPANTS:** Una mostra mixta de 57 pacients va participar a l'estudi. Un grup de 35 pacients combinaren el tractament antipsicòtic amb la participació al PEHS. Aquests pacients foren comparats amb un altre grup de 22 que únicament rebia tractament farmacològic. Els criteris de selecció dels subjectes van ser els següents: edat entre 18 i 40 anys; sense exacerbació aguda de la malaltia en el moment d'incorporar-se; complir amb les pautes de medicació, i convivència amb la família.

**RESULTATS:** Els resultats de la tesi confirmen la majoria de les hipòtesis plantejades. En concret, a) després de la intervenció PEHS s'observaren millories significatives en els símptomes negatius d'embotiment afectiu, retraïment social, i espontaneïtat i fluïdesa en la conversació. A més, disminuï de forma significativa l'evitació social activa, l'ansietat, els dèficits atencionals, la preocupació i els trastorns de la volició; b) La retirada del PEHS conduí a un empitjorament de tres símptomes: d'embotiment afectiu, pensament estereotipat, atenció deficient i trastorns de la volició; c) Els familiars del grup PEHS sentiren un alleugeriment de la sensació de càrrega emocional i disminuïren el nivell d'estrès; d) En el grup PEHS hi va haver una disminució de major magnitud de la freqüència d'ús d'alguns serveis sanitaris, així com una reducció dels costos econòmics.

**CONCLUSIONS:** L'estudi demostra que el tractament PEHS és més eficaç per a pacients i familiars que el tractament exclusiu amb neuroleptics; que la retirada del tractament provoca alguns retrocessos en les millories aconseguides i que els costos econòmics derivats de l'atenció sanitària es redueixen amb l'aplicació del PEHS. Les recomanacions terapèutiques que es deriven d'aquest estudi són, per una banda, que un programa d'intervenció, tipus PEHS, hauria d'estar sempre disponible per a tots els malalts que pateixen d'esquizofrènia i, per altra, que les intervencions psicosocials haurien de tenir una durada més llarga de la que habitualment tenen, per tal de mantenir a llarg termini les millories aconseguides.

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<b>Títol</b>	<i>Recuperació neuropsicològica de les lesions vasculars subcorticals i relació amb la localització valorada amb neuroimatge (TC, RM, SPECT)</i>
<b>Doctorand</b>	Montserrat Juncadella
<b>Director</b>	Dra. Carme Junqué Plaja

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**Resum**

Objectius de la tesi: 1) estudiar les alteracions neuropsicològiques i conductuals derivades de lesions vasculars als ganglis basals, 2) establir relacions entre l'afectació cognitivo-conductual i les dades de neuroimatge, i 3) determinar el valor predictiu de diversos paràmetres en la recuperació de les funcions cognitives.

La mostra estava formada per 47 pacients consecutius amb lesions úniques als ganglis basals comprovades mitjançant tomografia computaritzada (TC). Es realitzà un estudi longitudinal en tres fases: a l'ingrés, als tres mesos, i a l'any. Al mes i als tres mesos els pacients foren sotmesos a un estudi de neuroimatge funcional mitjançant tomografia per emissió de fotons simples (SPECT) per tal d'esbrinar la recuperació cerebral funcional. Als dos mesos es practicà una IRM per a definir amb més exactitud les lesions estructurals.

Els resultats mostraren que les funcions neuropsicològiques com l'atenció, memòria, funcions visoespacionals i visoconstructives s'afectaven de forma lleu o moderada.

Les afàsies observades eren lleus i mostraren patrons atípics.

L'edat fou el factor més predictiu de recuperació de funcions. Les dades de neuroimatge funcional (SPECT) complementaren les procedents de neuroimatge estructural (TC i RM) i estaven estretament relacionades amb el rendiment neuropsicològic.

La valoració de l'SPECT en fase aguda proporcionà dades pronòstiques rellevants sobre l'estat cognitiu i conductual dels pacients vasculars a l'any d'evolució. La hipoperfusió cortical deguda a lesions subcorticals es relacionà amb la reincorporació laboral.

L'apatia fou l'alteració conductual més freqüent en aquest tipus de lesió i fou especialment evident en els infarts que implicaven el nucli caudat, probablement per les estretes relacions amb el lòbul frontal.

Les variables neuropsicològiques i les dades metabòliques dels ganglis basals determinades amb SPECT podien predir en un 57% l'estat final cognitiu del pacient, mentre que l'estat final de les funcions motores es relacionà més amb la quantitat de lesió en TC o IRM.

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**Títol** *Antecedentes de asfixia perinatal en relación al deterioro neuropsicológico. Análisis cuantificado de resonancia magnética*

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**Doctorand** Cristina Mañeru Zunzarren

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**Director** Dra. Carme Junqué Plaja

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### **Resum**

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L'estat cognitiu del neonats amb antecedents de asfixia perinatal ha estat objecte d'investigacions des del 1862, any en què Little va suggerir que existia una associació entre els successos perinatals i els desenvolupament intel·lectual posterior. Els primes estudis neuropsicològics es dugueren a terme en les dècades 50-70 sense clars resultats degut als criteris d'inclusió dels subjectes, a l'escàs control de les variables i a l'ús de test de funcions cognitives generals en lloc de test neuropsicològics específics.

Fins ara estava àmpliament acceptat que els subjectes amb antecedents d'encefalopatia hipòxio-isquèmica perinatal greu tenien alteracions cognitives i conductuals persistents que es manifestaven amb paràlisi cerebral, deficiències intel·lectuals i altres alteracions neurològiques, com per exemple l'epilèpsia. Es desconeix però, que passa amb les encefalopaties hipòxiques lleus i moderades. Sovint aquest nens sense clares alteracions neurològiques i sense retard intel·lectual tenen dificultats de rendiment escolar, en especial quan augmenta el grau d'exigència acadèmica.

Tant els estudis neuropatològics com els de neuroimatge han demostrat que l'asfixia perinatal greu va associada a lesions als ganglis basals, cerebel, tàlem, hipocamp, substància blanca periventricular i zones corticals límits de territoris vasculars.

Els problemes en trobar dèficits neuropsicològics en nens amb antecedents d'asfíxia i amb encefalopatia moderada o lleu poden ser deguts al poc seguiment que es fa dels casos. En general, s'han estudiat mostres de nens de menys de 8 anys. Respecte a la neuroimatge, només s'han emprat tècniques d'inspecció visual o d'anàlisis quantificada molt simple. En aquest estudi, hem seleccionat una mostra de subjectes amb un mínim de 14 anys, edat en la que poden explorar de forma exhaustiva les funcions corticals incloses les pròpies dels lòbuls frontals i hem usat tècniques de neuroimatge estructural evolucionades (IRM volumètrica) i tècniques d'espectroscòpia per ressonància magnètica (ERM).

En un primer pas, es varen investigar les conseqüències neuropsicològiques a llarg termini de l'asfixia perinatal. Amb aquesta finalitat s'exploraren un grup d'adolescents amb antecedents d'encefalopatia lleu (n=8) i moderada (n=20) i es varen aparellar amb 28 adolescents de la mateixa edat, gènere i anys d'escolaritat sense cap antecedent perinatal o de possible afectació neurològica o psiquiàtrica. Per a l'exploració neuropsicològica es varen seleccionar tests que fossin sensibles a regions cerebrals especialment vulnerables a les condicions de hipoxia. Així es varen incloure test de memòria, de funcions frontals i d'habilitats perceptivo-motors

Els subjectes amb AP moderada mostraren diferències estadísticament significatives respecte al grup control en tests relacionats amb l'evocació d'informació tant verbal com visual, de velocitat perceptivo-motora i test que exploraven atenció i funcions executives. El grup amb antecedents d'encefalopatia lleu no diferien dels control en totes les variables examinades.

En conclusió es demostrà que en l'encefalopatia moderada sense clars alteracions neurològiques existeixen seqüeles neruropsicològiques subtils però persistents.

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**Títol** *Metabolisme de la regió amígdala-hipocampal dreta i del còrtex prefrontal medial mesurats mitjançant espectroscòpia per ressonància magnètica: alteracions en el trastorn d'angoixa abans i després del tractament farmacològic*

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**Doctorand** Guillem Masana Montejo

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**Director** Dr. Cristobal Gastó Ferrer

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### **Resum**

La tesi es mou en el marc de la teoria de la implicació de l'amígdala en l'ansietat.

Els objectius de la tesi són:

- 1) En un grup de malalts diagnosticats de trastorn d'angoixa (TA) i en un grup de comparació format per subjectes sans, determinar, mitjançant espectroscòpia per ressonància magnètica (ERM) de protons, el metabolisme de la regió amígdala-hipocampal dreta i del còrtex prefrontal medial.
- 2) Comparar els resultats de la ERM de protons dels malalts amb TA realitzada abans del tractament amb els del grup de subjectes sans.
- 3) En el grup de malalts amb TA, comparar els resultats de l'estudi espectroscòpic abans i després del tractament amb sertralina i correlacionar-los amb la resposta clínica.

Les hipòtesis plantejades són:

Els malalts amb TA presentaran una alteració del metabolisme de la regió amígdala-hipocampal dreta i del còrtex prefrontal medial respecte al grup de comparació de subjectes sans.

Si aquesta alteració del metabolisme es normalitza després d'un tractament farmacològic efectiu, això recolzarà la idea que aquestes alteracions constitueixen un marcador d'estat de la malaltia. En cas contrari, recolzaran la hipòtesi que són, en canvi, marcadors del tret de la malaltia.

### **Mètode**

Per la comparació de pacients respecte control s'utilitzarà una mostra de 11 subjectes. Per l'estudi abans/després del tractament s'usà una mostra de 17 pacients. S'utilitzà la història clínica protocolitzada per tal de diagnosticar els subjectes, l'entrevista estructurada per el DM-III-R i altres escales i instruments de seguiment clínic com la escala d'impressió Clínica global (CGI), Escala de Hamilton d'Ansietat, el qüestionari de cognicions agarofòbiques, l'inventari de mobilitat per l'agarofòbia i el qüestionari de sensacions corporals.

Per l'estudi espectroscòpic s'usa una RM de 11,5 T (GE, Signa 5,4 Milwaukee). Es col·locaren 2 voxels un a la regió temporal medial dreta de 2cmx2cmx2cm i un altre al còrtex prefrontal medial en un tall coronal de 2cmx 2cmx 3cm. S'usà la seqüència PRES amb un TR de 1500 i un TE de 25 o 35 msec. L'anàlisi posterior es va fer amb el software PROBE de GE.

### **Disseny**

El primer estudi és observacional transversal analític. El segon és un estudi longitudinal de grups aparellats. S'utilitzen comparacions de mitjanes i correlacions.

Las conclusions foren:

- 1) els pacients amb trastorn d'angoixa presentaren uns valors de creatina inferior a la regió temporal medial, però no a la frontal. El resultat es suggerent d'un hipermetabolisme de la regió.
- 2) Els valors de creatina en la regió temporal medial augmenten de forma significativa després del tractament farmacològic. Això junt amb la millora clínica suggereix que aquest metabòlic podria considerar-se un marcador d'estat del trastorn d'angoixa.
- 3) La diferència abans i després del tractament dels nivells de creatina correlaciona amb la puntuació de l'escala d'evitació, de manera que els pacients que més milloren presenten més increment de creatina.
- 4) La millora clínica està relacionada amb els canvis en creatina

S'han observat també increments postractament del valors de mioinositol i de NAA, de difícil interpretació. Aquest valors incrementats s'observen a les dues regions temporal medial i prefrontal.

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**Títol** *Perfiles neuropsicológicos de la parálisis cerebral espástica y discinética bilateral*

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**Doctorand** Roser Pueyo Benito

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**Director** Dr. Pere Vendrell Gómez

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### **Resum**

Els estudis sobre el rendiment cognitiu de la Paràlisi Cerebral (PC) són escassos i es refereixen fonamentalment al rendiment cognitiu general. El principal objectiu d'aquest treball és analitzar el rendiment neuropsicològic de la PC espàstica, discinètica i mixta mitjançant una àmplia avaluació neuropsicològica.

La mostra està composta per 40 subjectes de 6 a 38 anys relativament homogenis en gravetat motora, donat que tots necessitaven de cadira de rodes per desplaçar-se. Les funcions avaluades van ser: rendiment general (Matrius Progressives de Raven-Color) llenguatge (Peabody Picture Vocabulary Test-Revised, Token Test i Screening Test of Spanish Grammar), funció visuoperceptiva (Facial Recognition Test, Judgment of Line Orientation Test, Cubs), memòria (Dígits, Corsi Blocks, Recognition Memory Test), atenció (Continuous Performance Test), pràxies i funció frontal (Wisconsin Card Sorting Test).

Vam trobar que la comprensió gramatical estava preservada en la majoria de subjectes (87%) en contrast amb les habilitats visuoespacials (10%). Quan es van agrupar els subjectes en funció del rendiment neuropsicològic no només es va evidenciar l'existència de persones amb alt, mig i baix rendiment sinó que s'observaren discrepàncies en les habilitats visuoperceptives i la funció frontal. En aquesta mostra, la puntuació de les Matrius Progressives de Raven-Color no era representativa del rendiment general donat que no correlacionava amb la funció frontal. Existien diferències en la comprensió de vocabulari i gramatical en relació a l'habilitat d'expressar-se mitjançant l'escriptura però no en relació a l'expressió oral. També es van obtenir diferències en la comprensió de les pràxies en relació a la eficàcia d'execució pràxica. Es va observar la dissociació entre la memòria de treball (associada al còrtex anterior) i la memòria declarativa (associada al còrtex posterior). En relació a la memòria també existien importants asimetries hemisfèriques. La PC espàstica i discinètica presentaven diferències en el seu perfil neuropsicològic. Els subjectes amb PC discinètica rendien millor en comprensió gramatical, memòria immediata, memòria de treball i habilitats visuoespacials al ser comparats amb els subjectes amb predomini d'espasticitat. Finalment, es van observar diferències en el rendiment cognitiu en funció de l'edat de gestació, la presència d'hipotonia en el naixement i la medicació antiepilèptica.

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## 6. LLISTAT DE PUBLICACIONS AMB FACTOR D'IMPACTE

## 6.1. Subunitat de Psiquiatria

Articles amb factor d'impacte segons SCI i SSCI de ISI

Total articles: 25

Total factor impacte: 76,93

Mitjana: 3,08

01. Alonso P; Pujol J; Cardoner N; Benlloch L; Deus J; **Menchón JM**; Capdevila A; **Vallejo J**.  
*Right prefrontal repetitive transcranial magnetic stimulation in obsessive-compulsive disorder: a double-blind, placebo-controlled study.*  
Am J Psychiatry, 2001 Jul; Vol. 158 (7), pp. 1143-5.  
IF=6,577
02. Alonso P; **Menchon JM**; Pifarre J; **Mataix-Cols D**; Torres L; Salgado P; **Vallejo J**.  
*Long-term follow-up and predictors of clinical outcome in obsessive-compulsive patients treated with serotonin reuptake inhibitors and behavioral therapy.*  
J Clin Psychiatry, 2001 Jul; Vol. 62 (7), pp. 535-40.  
IF=4,454
03. Arias B; **Gastó C**; Catalán R; Gutiérrez B; Pintor L; Fañanás L.  
*The 5-HT(2A) receptor gene 102T/C polymorphism is associated with suicidal behavior in depressed patients.*  
Am J Med Genet, 2001 Dec 8; Vol. 105 (8), pp. 801-4.  
IF=2,479
04. Arias B; Collier DA; **Gastó C**; Pintor L; Gutiérrez B; Vallès V; Fañanás L  
*Genetic variation in the 5-HT5A receptor gene in patients with bipolar disorder and major depression.*  
Neurosci Lett, 2001 May 4; Vol. 303 (2), pp. 111-4.  
IF=2,091
05. Arias B; Gutiérrez B; Pintor L; **Gastó C**; Fañanás L  
*Variability in the 5-HT(2A) receptor gene is associated with seasonal pattern in major depression.*  
Mol Psychiatry, 2001 Mar; Vol. 6 (2), pp. 239-42.  
IF=8,927
06. Benabarre A; Vieta E; Colom F; Martínez-Arán A; Reinares M; **Gastó C**.  
*Bipolar disorder, schizoaffective disorder and schizophrenia: epidemiologic, clinical and prognostic differences.*  
Eur Psychiatry, 2001 Apr; Vol. 16 (3), pp. 167-72.  
IF=0,748
07. **Bernardo M**; Parellada E; Lomeña F; Catafau AM; Font M; Gómez JC; López-Carrero C; Gutiérrez F; Pavía J; **Salamero M**.  
*Double-blind olanzapine vs. haloperidol D2 dopamine receptor blockade in schizophrenic patients: a baseline-endpoint.*  
Psychiatry Res, 2001 Aug 25; Vol. 107 (2), pp. 87-97.  
IF=1,557

08. Blanch J; Martínez-Pallí G; Navinés R; Arcega JM; Imaz ML; Santos P; Faulí A; **Bernardo M**; Gomar C.  
*Comparative hemodynamic effects of urapidil and labetalol after electroconvulsive therapy.*  
J ECT, 2001 Dec; Vol. 17 (4), pp. 275-9.  
IF=1,817
09. Blanch J; Martínez E; Rousaud A; Blanco JL; García-Viejo MA; Peri JM; Mallolas J; de Lazzari E; **de Pablo J**; Gatell JM  
*Preliminary data of a prospective study on neuropsychiatric side effects after initiation of efavirenz.*  
J Acquir Immune Defic Syndr, 2001 Aug 1; Vol. 27 (4), pp. 336-43.  
IF=3,046
10. de Azpiazu P; **Salamero M**; **Pujol J**; Cuevas R  
[*Aggressive behaviour in dementia. RAGE scale, validation of the version in Spanish*]  
*Conductas agresivas en la demencia. Escala RAGE, validación de la versión en castellano.*  
Rev Neurol, 2001 Nov 16-30; Vol. 33 (10), pp. 928-30.  
IF=0,256
11. Gilaberte I; Montejo AL; de la Gandara J; Perez-Sola V; **Bernardo M**; Massana J; Martin-Santos R; Santiso A; Noguera R; Casais L; Perez-Camo V; Arias M; Judge R. Corporate Author(s): Fluoxetine Long-Term Study Group  
*Fluoxetine in the prevention of depressive recurrences: a double-blind study.*  
J Clin Psychopharmacol, 2001 Aug; Vol. 21 (4), pp. 417-24.  
IF=5,052
12. Gómez E; Catalán R; Navinés R; **Gastó C**.  
[Serotonin receptor changes in depression: evidences and limitations]  
*Alteraciones de los receptores serotoninérgicos en la depresión: evidencias y limitaciones.*  
Actas Esp Psiquiatr, 2001 May-Jun; Vol. 29 (3), pp. 186-94.  
IF=0,098
13. Gutiérrez F; Torrens M; **Boget T**; Martín-Santos R; Sangorrín J; Pérez G; **Salamero M**.  
*Psychometric properties of the Temperament and Character Inventory (TCI) questionnaire in a Spanish psychiatric population.*  
Acta Psychiatr Scand, 2001 Feb; Vol. 103 (2), pp. 143-7.  
IF=1,774
14. Massana J; López Risueño JA; Masana G; **Marcos T**; González L; **Otero A**.  
*Subtyping of panic disorder patients with bradycardia.*  
Eur Psychiatry, 2001 Mar; Vol. 16 (2), pp. 109-14.  
IF=0,748
15. Montserrat JM; Ferrer M; Hernandez L; Farré R; Vilagut G; Navajas D; Badia, JR; Carrasco E; **De Pablo J**; Ballester E.  
*Effectiveness of CPAP treatment in daytime function in sleep apnea syndrome: a randomized controlled study with an optimized placebo.*  
Am J Respir Crit Care Med, 2001 Aug 15; Vol. 164 (4), pp. 608-13.  
IF=5,443
16. Navarro V; **Gastó C**; Torres X; **Marcos T**; Pintor L.  
*Citalopram versus nortriptyline in late-life depression: a 12-week randomized single-blind*

*study.*

Acta Psychiatr Scand, 2001 Jun; Vol. 103 (6), pp. 435-40.

IF=1,774

17. Navarro V; **Gastó C**; Lomeña F; Mateos JJ; **Marcos T**.  
*Frontal cerebral perfusion dysfunction in elderly late-onset major depression assessed by 99mTc-HMPAO SPECT.*  
Neuroimage, 2001 Jul; Vol. 14 (1 Pt 1), pp. 202-5.  
IF=6,857
18. Navinés R; Gómez E; Franco JG; de Pablo J  
[*Delirium in a consultation liaison psychiatry unit of a general hospital*]  
*Delirium en la interconsulta psiquiátrica de un hospital general.*  
Actas Esp Psiquiatr, 2001 May-Jun; Vol. 29 (3), pp. 159-64.  
IF=0,098
19. Penadés R; **Gastó C**; Boget T; Catalán R; **Salamero M**.  
*Deficit in schizophrenia: the relationship between negative symptoms and neurocognition.*  
Compr Psychiatry, 2001 Jan-Feb; Vol. 42 (1), pp. 64-9.  
IF=1,400
20. Rami-Gonzalez L; **Bernardo M**; **Boget T**; Salamero M; Gil-Verona JA; **Junque C**.  
*Subtypes of memory dysfunction associated with ECT: characteristics and neurobiological bases.*  
J ECT, 2001 Jun; Vol. 17 (2), pp. 129-35.  
IF=1,817
21. **Válides M**; Jódar I; Ojuel J; Sureda B.  
[*Alexithymia and verbal intelligence: a psychometric study*]  
*Alexitimia e inteligencia verbal: un estudio psicométrico.*  
Actas Esp Psiquiatr, 2001 Sep-Oct; Vol. 29 (5), pp. 338-42.  
IF=0,098
22. Vieta E; **Gastó C**; Colom F; Reinares M; Martínez-Arán A; Benabarre A; Akiskal HS  
*Role of risperidone in bipolar II: an open 6-month study.*  
J Affect Disord, 2001 Dec; Vol. 67 (1-3), pp. 213-9.  
IF=1,938
23. Vieta E; Reinares M; Corbella B; Benabarre A; Gilaberte I; Colom F; Martínez-Arán A;  
**Gastó C**; Tohen M  
*Olanzapine as long-term adjunctive therapy in treatment-resistant bipolar disorder.*  
J Clin Psychopharmacol, 2001 Oct; Vol. 21 (5), pp. 469-73.  
IF=5,052
24. Vieta E; Herraiz M; Fernández A; **Gastó C**; Benabarre A; Colom F; Martínez-Arán A;  
Reinares M  
*Efficacy and safety of risperidone in the treatment of schizoaffective disorder: initial results from a large, multicenter surveillance study. Group for the Study of Risperidone in Affective Disorders (GSRAD).*  
J Clin Psychiatry, 2001 Aug; Vol. 62 (8), pp. 623-30.  
IF=4,454
25. Zunzunegui MV; Béland F; **Otero A**.  
*Support from children, living arrangements, self-rated health and depressive symptoms of older people in Spain.*

Int J Epidemiol, 2001 Oct; Vol. 30 (5), pp. 1090-9.  
IF=1,892

26. Wright P; Birkett M; David SR; Meehan K; Ferchland I; Alaka KJ; Saunders JC; Krueger J; Bradley P; San L; **Bernardo M**; Reinstein M; Breier A  
*Double-blind, placebo-controlled comparison of intramuscular olanzapine and intramuscular haloperidol in the treatment of acute agitation in schizophrenia.*  
Am J Psychiatry, 2001 Jul; Vol. 158 (7), pp. 1149-51.  
IF=6,577

**6.2. Subunitat de Psicobiologia Clínica**

Articles amb factor d'impacte segons SCI i SSCI de ISI

Total articles: 30

Total Factor impacte: 76,40

Mitjana 2,55

**01. Adan A; Sánchez-Turet M.**

*Influence of smoking and gender on diurnal variations of heart rate reactivity in humans.*

Neurosci Lett, 2001 Jan 12; Vol. 297 (2), pp. 109-12.

IF=2,091

**02. Adan A; Sánchez-Turet M.**

*Gender differences in diurnal variations of subjective activation and mood.*

Chronobiol Int, 2001 May; Vol. 18 (3), pp. 491-502.

IF=1,883

**03. Alegret M; Junqué C; Valdeoriola F; Vendrell P; Pilleri M; Rumià J; Tolosa E.**

*Effects of bilateral subthalamic stimulation on cognitive function in Parkinson disease.*

Arch Neurol, 2001 Aug; Vol. 58 (8), pp. 1223-7.

IF=4,393

**04. Alegret M; Junqué C; Valdeoriola F; Vendrell P; Martí MJ; Tolosa E**

*Obsessive-compulsive symptoms in Parkinson's disease.*

J Neurol Neurosurg Psychiatry, 2001 Mar; Vol. 70 (3), pp. 394-6.

IF=2,846

**05. Alegret M; Vendrell P; Junque C; Valdeoriola F; Tolosa E**

*Visuospatial deficits in Parkinson's disease assessed by judgment of line orientation test: error analyses and practice effects.*

Clin Exp Neuropsychol 2001 Oct; 23 (5), pp. 592-8.

IF=1,067

**06. Almirall H; Bautista V; Sánchez-Bahillo A; Trinidad-Herrero M**

*Ultradian and circadian body temperature and activity rhythms in chronic MPTP treated monkeys.*

Neurophysiol Clin, 2001 Jun; Vol. 31 (3), pp. 161-70.

IF=0,516

**07. Atienza M; Cantero JL; Escera C.**

*Auditory information processing during human sleep as revealed by event-related brain potentials.*

Clin Neurophysiol, 2001 Nov; Vol. 112 (11), pp. 2031-45.

IF=1,672

**08. Bartrés-Faz D; Junqué C; Clemente IC; Serra-Grabulosa JM; Guardia J; López-Alomar A; Sánchez-Aldeguer J; Mercader JM; Bargalló N; Olondo M; Moral P.**

*MRI and genetic correlates of cognitive function in elders with memory impairment.*

Neurobiol Aging, 2001 May-Jun; Vol. 22 (3), pp. 449-59.

IF=4,159

**09. Bartrés-Faz D; Clemente IC; Junqué C; Valveny N; López-Alomar A; Sánchez-Aldeguer J; López-Guillén A; Moral P.**

*APOE and APOC1 genetic polymorphisms in age-associated memory impairment.*  
 Neurogenetics, 2001 Oct; Vol. 3 (4), pp. 215-9.  
 IF=2,596

10. **Bartrés-Faz D; Clemente IC; Junqué C**  
 [ *White matter changes and cognitive performance in aging* ]  
*Cambios en la sustancia blanca y rendimiento cognitivo en el envejecimiento.*  
 Rev Neurol, 2001 Aug 16-31; Vol. 33 (4), pp. 347-53.  
 IF=0,256
11. **Bartrés-Faz D; Junqué C; López-Alomar A; Valveny N; Moral P; Casamayor R; Salido A; Bel C; Clemente IC.**  
*Neuropsychological and genetic differences between age-associated memory impairment and mild cognitive impairment entities.*  
 J Am Geriatr Soc, 2001 Jul; Vol. 49 (7), pp. 985-90.  
 IF=3,136
12. **Escera C; Yago E; Alho K**  
 Electrical responses reveal the temporal dynamics of brain events during involuntary attention switching.  
 Eur J Neurosci, 2001 Sep; Vol. 14 (5), pp. 877-83.  
 IF=3,862
13. **Fernández-Aranda F; Amor A; Jiménez-Murcia S; Giménez-Martínez L; Turón-Gil V; Vallejo-Ruiloba J.**  
*Int J Eat Disord* 2001 Dec; 30 (4), pp. 458-61.  
 IF=1,336
14. **Fernández-Aranda F; Solano R; Badía A; Jiménez-Murcia S**  
*Binge eating disorder onset by unusual parasitic intestinal disease: a case-report.*  
*Int J Eat Disord* 2001 Jul; 30 (1), pp. 107-9.  
 IF=1.336
15. **Grau C; Polo MD; Yago E; Gual A; Escera C**  
 Auditory sensory memory as indicated by mismatch negativity in chronic alcoholism.  
*Clin Neurophysiol*, 2001 May; Vol. 112 (5), pp. 728-31.  
 IF=1,672
16. Gumenyuk V; Korzyukov O; Alho K; **Escera C**; Schröger E; Ilmoniemi RJ; Näätänen R  
 Brain activity index of distractibility in normal school-age children.  
*Neurosci Lett*, 2001 Nov 16; Vol. 314 (3), pp. 147-50.  
 IF=2,091
17. **Jurado MA; Junqué C; Vallejo J; Salgado P.**  
 Impairment of incidental memory for frequency in patients with obsessive-compulsive disorder.  
*Psychiatry Res*, 2001 Nov 30; Vol. 104 (3), pp. 213-20.  
 IF=1,557
18. **Mañeru C; Junqué C; Botet F; Tallada M; Guardia J.**  
*Neuropsychological long-term sequelae of perinatal asphyxia.*  
*Brain Inj*, 2001 Dec; Vol. 15 (12), pp. 1029-39.  
 IF=0,914
19. **Mañeru C; Junqué C; Bargalló N; Olondo M; Botet F; Tallada M; Guardia J; Mercader**

- JM.  
*(1)H-MR spectroscopy is sensitive to subtle effects of perinatal asphyxia.*  
 Neurology, 2001 Sep 25; Vol. 57 (6), pp. 1115-8.  
 IF=4,781
20. **Mataró M; Junqué C;** Poca M A; Sahuquillo J  
*Neuropsychological findings in congenital and acquired childhood hydrocephalus.*  
 Neuropsychol Rev, 2001 Dec; Vol. 11 (4), pp. 169-78.  
 IF= 1,250
21. **Mataró M;** Poca MA; Sahuquillo J; Pedraza S; **Ariza M;** Amoros S; **Junqué C.**  
*Neuropsychological outcome in relation to the traumatic coma data bank classification of computed tomography imaging.*  
 J Neurotrauma, 2001 Sep; Vol. 18 (9), pp. 869-79.  
 IF=2,877
22. **Mataró M; Jurado MA;** García-Sánchez C; Barraquer L; Costa-Jussà FR; **Junqué C.**  
*Long-term effects of bilateral frontal brain lesion: 60 years after injury with an iron bar.*  
 Arch Neurol, 2001 Jul; Vol. 58 (7), pp. 1139-42.  
 IF=4,393
23. Monés J; **Adan A;** López JS; Artés M  
*Validation of the Spanish version of the Glasgow Dyspepsia Severity.*  
 Rev Esp Enferm Dig, 2001 Mar; Vol. 93 (3), pp. 164-75.  
 IF=0,384
24. Novitski N; Alho K; Korzyukov O; Carlson S; Martinkauppi S; **Escera C;** Rinne T; Aronen HJ; Näätänen R  
*Effects of acoustic gradient noise from functional magnetic resonance imaging on auditory processing as reflected by event-related brain potentials.*  
 Neuroimage, 2001 Jul; Vol. 14 (1 Pt 1), pp. 244-51.  
 IF=6,857
25. Pujol J; **Vendrell P;** Deus J; **Junqué C;** Bello J; Martí-Vilalta JL; Capdevila A.  
*The effect of medial frontal and posterior parietal demyelinating lesions on stroop interference.*  
 Neuroimage, 2001 Jan; Vol. 13 (1), pp. 68-75.  
 IF= 6,857
26. **Serra-Grabulosa JM; Grau C; Escera C; Sanchez-Turet M.**  
*The H1-receptor antagonist dextro-chlorpheniramine impairs selective auditory attention in the absence of subjective awareness of this impairment.*  
 J Clin Psychopharmacol, 2001 Dec; Vol. 21 (6), pp. 599-602.  
 IF=5,052
27. **Verges K; Serra-Grabulosa JM; Junqué C; Alvarez A; Bartrés-Faz D;** Mercader JM  
*[Study of the long term sequelae of traumatic brain injury: evaluation of declarative and procedural memory, and its neuroanatomic substrate]*  
*Estudio de las secuelas a largo plazo de los ttraumatismos craneoencefálicos: evaluación de la memoria declarativa y procedimental y de su sustrato neuroanatómico.*  
 Rev Neurol, 2001 Jul 1-15; Vol. 33 (1), pp. 30-4.  
 IF=0,256
28. **Verges K; Junqué C;** Levin HS; **Jurado MA; Pérez-Gómez M; Bartrés-Faz D;** Barrios M; **Alvarez A;** Bartumeus F; Mercader JM

*Correlation of atrophy measures on MRI with neuropsychological sequelae in children and adolescents with traumatic brain injury.*

Brain Inj, 2001 Mar; Vol. 15 (3), pp. 211-21.

IF=0,914

29. **Yago E; Corral MJ; Escera C.**

*Activation of brain mechanisms of attention switching as a function of auditory frequency change.*

Neuroreport, 2001 Dec 21; Vol. 12 (18), pp. 4093-7.

IF=2,696

30. **Yago E; Escera C;** Alho K; Giard MH.

*Cerebral mechanisms underlying orienting of attention towards auditory frequency changes.*

Neuroreport, 2001 Aug 8; Vol. 12 (11), pp. 2583-7.

IF=2,696

## 7. RESUMS DELS ARTICLES AMB FACTOR D'IMPACTE

### 7.1. Subunitat de Psiquiatria

Alonso P; Pujol J; Cardoner N; Benlloch L; Deus J; Menchón JM; Capdevila A; Vallejo J

Department of Psychiatry, Bellvitge University Hospital, Barcelona, Spain.

Right prefrontal repetitive transcranial magnetic stimulation in obsessive-compulsive disorder: a double-blind, placebo-controlled study.

Am J Psychiatry, 2001 Jul; Vol. 158 (7), pp. 1143-5.

**OBJECTIVE:** The efficacy of repetitive transcranial magnetic stimulation (rTMS) of the right prefrontal cortex for patients with obsessive-compulsive disorder (OCD) was studied under double-blind, placebo-controlled conditions. **METHOD:** Patients were randomly assigned to 18 sessions of real (N=10) or sham (N=8) rTMS. Treatments lasted 20 minutes, and the frequency was 1 Hz for both conditions, but the intensity was 110% of motor threshold for real rTMS and 20% for the sham condition. **RESULTS:** No significant changes in OCD were detected in either group after treatment. Two patients who received real rTMS, with checking compulsions, and one receiving sham treatment, with sexual/religious obsessions, were considered responders. **CONCLUSIONS:** Low-frequency rTMS of the right prefrontal cortex failed to produce significant improvement of OCD and was not significantly different from sham treatment. Further studies are indicated to assess the efficacy of rTMS in OCD and to clarify the optimal stimulation characteristics.

Alonso P; Menchon JM; Pifarre J; Mataix-Cols D; Torres L; Salgado P; Vallejo J

Department of Psychiatry, Hospital Principes de España, Ciudad Sanitaria y Universitaria de Bellvitge, Barcelona, Spain.

Long-term follow-up and predictors of clinical outcome in obsessive-compulsive patients treated with serotonin reuptake inhibitors and behavioral therapy.

J Clin Psychiatry, 2001 Jul; Vol. 62 (7), pp. 535-40.

**BACKGROUND:** The objective of this study was to examine the long-term course of obsessive-compulsive disorder (OCD) in patients treated with serotonin reuptake inhibitors (SRIs) and behavioral therapy and to identify predictors of clinical outcome. **METHOD:** Sixty outpatients meeting DSM-II-R or DSM-IV criteria for OCD were followed up for 1 to 5 years (mean = 2.5 years). All of them received prolonged pharmacologic therapy with an SRI. **RESULTS:** Thirty-seven patients (61.7%) completed an adequate behavioral treatment. At long-term assessment, 22 patients (36.7%) exhibited a global Yale-Brown Obsessive Compulsive Scale (Y-BOCS) score greater than 16 or a final reduction in Y-BOCS global score of less than 35% and were considered nonresponders. Patients who completed behavioral therapy showed a significant decrease in Y-BOCS compulsions subscale score ( $p = .01$ ), whereas no significant differences in either Y-BOCS global or obsessions subscale scores between those who did and those who did not undergo behavioral therapy were detected. Obsessions of sexual/religious content were the unique factor related to a poorer long-term outcome. **CONCLUSION:** A substantial number of OCD patients showed persistent disabling symptoms at the long-term follow-up in spite of combined pharmacologic and behavioral treatment. Major benefits from behavioral therapy appeared to be the improvement of ritualistic behaviors. Sexual/religious obsessions predicted poorer long-term outcome, whereas short-term response to SRI treatment failed to achieve predictive value in the long-term course of OCD.

Arias B; Gastó C; Catalán R; Gutiérrez B; Pintor L; Fañanás L

Unitat d'Antropologia, Departament de Biologia Animal, Facultat de Biologia, Universitat de Barcelona, Barcelona, Spain.

The 5-HT(2A) receptor gene 102T/C polymorphism is associated with suicidal behavior in depressed patients.

Am J Med Genet, 2001 Dec 8; Vol. 105 (8), pp. 801-4.

Several lines of evidence suggest that genetic factors constitute an important determinant of suicidal behavior. A significant association between the 5-HT(2A)-C allele and suicidality has recently been reported. The aim of this study was to investigate whether the proposed association between 5-HT(2A)-102T/C polymorphism and suicidality could be replicated in a larger and independent sample of Spanish patients with major depression. The 102T/C polymorphism of the 5-HT(2A) receptor gene was analyzed in 159 patients with major depression (DSM-IV criteria) and 164 unrelated and healthy controls using a case control design. All individuals were subjects of Spanish origin. Significant differences in allele (chi-square = 4.13, df = 1, P = 0.04) and genotype (chi-square = 6.19, df = 2, P = 0.04) distributions were found between non-suicide attempters and suicide attempters. Moreover, those patients carrying 5-HT(2A)-C allele had more than five times the risk for attempting suicide than noncarriers (OR = 5.50, 95% CI = 1.18-35.20, P = 0.01). Our results replicate the proposed association between 5HT(2A)-C allele and suicidality in major depression. Moreover, no overall associations are detected when patients with major depression and controls are compared for 102T/C frequencies, suggesting that the increased risk for suicidality conferred by 5-HT(2A)-C allele is primarily associated with suicidal behavior and not with the diagnosis of major depression itself.

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Arias B; Collier DA; Gastó C; Pintor L; Gutiérrez B; Vallès V; Fañanás L

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Genetic variation in the 5-HT5A receptor gene in patients with bipolar disorder and major depression.

Neurosci Lett, 2001 May 4; Vol. 303 (2), pp. 111-4.

In the present study, genetic variation of the 5-HT5A receptor was analyzed in patients affected by affective disorders and healthy controls. The sample consisted of 181 patients with major depression, 88 patients with bipolar affective disorder (BP) and 157 unrelated controls (C), all of Spanish origin. Two polymorphisms (-19G/C and 12A/T) in the 5-HT5A receptor gene were analyzed by polymerase chain reaction amplification and subsequent enzyme digestion. No genotype, allele or haplotype differences were found when we compared patients and controls. When clinical variables were considered as possible tools for detecting genetic heterogeneity, no differences were found. Our results suggest that the polymorphisms analyzed in the 5-HT5A receptor gene do not play a major role in the pathogenesis of affective disorders.

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Arias B; Gutiérrez B; Pintor L; Gastó C; Fañanás L

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Variability in the 5-HT(2A) receptor gene is associated with seasonal pattern in major depression.

Mol Psychiatry, 2001 Mar; Vol. 6 (2), pp. 239-42.

The 102-T/C polymorphism of the 5-HT(2A) receptor gene was analysed in 159 patients with major depression and 164 unrelated and healthy controls using a case-control design. Allele and genotype frequencies did not differ between cases and controls. No differences according to sex, age of onset, melancholia, suicidal behaviour or family history of psychiatric illness were found. However, genotype distributions significantly differed between patients with seasonal pattern in their episodes (MDS) and patients with no seasonal pattern (N-MDS) ( $\chi^2 = 10.63$ ;  $P = 0.004$ ). A seasonal pattern was 7.57 times more frequent in 102C-allele carriers than in 102T homozygous (95.1% of patients MDS carried 102C-allele vs 72% of patients N-MDS ( $\chi^2 = 9.45$ ,  $df=1$ ,  $P = 0.002$ ; OR = 7.57 (95% CI: 1.65--48.08)). These results suggest that variation in the 5-HT2A receptor gene may play a role in the development of major depression with seasonal pattern and support the existence of a genetic and etiological heterogeneity underlying the diagnosis of major depression.

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Bipolar disorder, schizoaffective disorder and schizophrenia: epidemiologic, clinical and prognostic differences.

Eur Psychiatry, 2001 Apr; Vol. 16 (3), pp. 167-72.

The validity and nosologic status of schizoaffective disorder is still a controversial issue. This study was conducted to analyze the demographic, clinical and prognostic variables that determine the validity of the diagnosis of schizoaffective disorder bipolar type. We analyzed and compared 138 outpatients: 67 with type I bipolar disorder, 34 with schizoaffective disorder bipolar type and 37 with schizophrenia. They were all diagnosed following research diagnostic criteria and assessed according to the Schedule for Affective Disorders and Schizophrenia. Schizoaffective unipolar patients were excluded. The results reaffirmed that, from the standpoints of demographics, clinical features and prognosis, schizoaffective disorders bipolar type can be classified as a phenotypic form at an intermediate point between bipolar I disorder and schizophrenia. These results emphasize the importance of longitudinal follow-up in the diagnosis and assessment of psychotic syndromes. Although cross-sectional symptoms were closer to the schizophrenia spectrum, the course of the illness resembled more that of bipolar patients, resulting in an intermediate outcome.

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Double-blind olanzapine vs. haloperidol D2 dopamine receptor blockade in schizophrenic patients: a baseline-endpoint.

Psychiatry Res, 2001 Aug 25; Vol. 107 (2), pp. 87-97.

The aim of this study was to compare in vivo striatal D2 dopamine receptor occupancy induced by olanzapine and haloperidol in schizophrenic patients using a baseline-endpoint [(123)I]IBZM single photon computed emission tomography (SPECT) design. The relationships of striatal D2 receptor occupancy with clinical efficacy and extrapyramidal symptoms (EPS) were also assessed. Twenty-seven inpatients with schizophrenia or schizophreniform disorder were included in a 4-week prospective, randomized, double-blind, parallel and comparative clinical trial. Thirteen patients were treated with haloperidol (10 mg/day) and 14 with olanzapine (10 mg/day). Ratings of clinical status and EPS were obtained weekly. The percentage of D2 receptor occupancy was estimated by using basal ganglia (striatum)/frontal cortex IBZM uptake ratios obtained from each patient before and after 4 weeks of maintained antipsychotic treatment. Olanzapine led to a mean striatal D2 receptor occupancy of 49% (range 28-69%), which was significantly lower than that induced by haloperidol (mean 64%, range 46-90%). The baseline-endpoint SPECT design used in this study revealed lower antipsychotic D2 occupancy percentage values than those reported in the literature, using other approaches. The degree of striatal D2 receptor occupancy correlated to the EPS, which predominantly appeared in patients on haloperidol. No relationship was found between the striatal D2 receptor occupancy and clinical improvement. Olanzapine induced a lower striatal D2 occupancy than haloperidol. This low striatal D2 occupancy, together with the lower incidence of EPS in olanzapine-treated patients, contributed to confirm the atypical behavior of this new antipsychotic drug. Nevertheless, conclusions based on SPECT-estimated percentages of antipsychotic D2 occupancy should be cautious, since the SPECT design could influence the results. In this regard, SPECT studies including baseline and endpoint examinations should be encouraged.

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Comparative hemodynamic effects of urapidil and labetalol after electroconvulsive therapy.

J ECT, 2001 Dec; Vol. 17 (4), pp. 275-9.

Urapidil, a postsynaptic alpha 1 -adrenergic antagonist, has been reported to improve intraoperative hemodynamic stability, although it has never been used to prevent the hemodynamic response of electroconvulsive therapy (ECT). This study was designed to evaluate the clinical effectiveness of urapidil, as an alternative to labetalol, in preventing the hemodynamic response of ECT. Twenty-seven patients undergoing a series of six consecutive ECT treatments were studied. Each patient received all three pretreatments twice: no drug, labetalol 0.2 mg/kg, or urapidil 25 mg. Systolic, diastolic, and mean blood pressure and heart rate (HR) were recorded during the awake state, after anesthesia induction, and 1, 2, 5, 10 and 30 minutes after electroencephalographic (EEG) seizure ended. The duration of the EEG convulsion was also recorded. After induction, the HR increased for no drug and urapidil pretreatments, whereas it decreased when labetalol was given. Labetalol and urapidil attenuated the peak increase of blood pressure and returned it to earlier baseline values. There were no differences in the duration of EEG convulsion between the three pretreatments. Urapidil seems to be a good alternative to labetalol for attenuating the hypertensive response to ECT in cases where there is a contraindication to beta-antagonists.

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Preliminary data of a prospective study on neuropsychiatric side effects after initiation of efavirenz.

J Acquir Immune Defic Syndr, 2001 Aug 1; Vol. 27 (4), pp. 336-43.

**OBJECTIVE:** To assess baseline variables able to predict neuropsychiatric side effects (NPSEs) associated with the initiation of an efavirenz (EFV)-containing regimen in HIV-1-infected patients. **DESIGN:** Open-label, prospective, observational study. **METHODS:** Consecutive HIV-1-infected outpatients in whom EFV was prescribed underwent a psychiatric interview. At baseline and at 2, 4, and 12 weeks, patients completed the Symptoms Check List-90-Revised (SCL-90-R), the Medical Outcome Study for HIV-positive patients (MOS-HIV), and a standardized questionnaire concerning potential NPSEs. **RESULTS:** Preliminary data showed that discontinuation of EFV because of NPSEs occurred in 4 of 31 patients (13%). Patients who completed the follow-up showed a decrease in SCL-90-R total score ( $p = .004$ ) and in several subscales such as Interpersonal Sensitivity ( $p = .009$ ), Depression ( $p = .001$ ), and Anxiety ( $p = .040$ ), whereas no changes in MOS-HIV were observed. Having fewer years of education ( $p = .006$ ), having fewer baseline central nervous symptoms ( $p = .000$ ), reporting better baseline physical status ( $p = .013$ ), and having higher baseline scores in the Health Transition subscale of the MOS-HIV ( $p = .000$ ) and in the Somatization subscale of the SCL-90-R ( $p = .002$ ) were associated with more NPSEs. **CONCLUSION:** Patients maintained on EFV showed a decrease in psychologic distress related to self-image, depression, and anxiety, without any effect on quality of life. Patients with a lower level of education, those who feel physically and psychologically better at baseline than in the past, and those who suffer from more distress as a result of physical complaints may be at greater risk of reporting more NPSEs after EFV initiation.

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de Azpiazu P; Salamero M; Pujol J; Cuevas R

[Aggressive behaviour in dementia. RAGE scale, validation of the version in Spanish]

Conductas agresivas en la demencia. Escala RAGE, validación de la versión en castellano.

Rev Neurol, 2001 Nov 16-30; Vol. 33 (10), pp. 928-30.

**INTRODUCTION:** Aggressive behaviours are frequent in the different phases of dementia's evolution. These not only constitute a major problem for the families and the caring staff, but cause fatigue and burn out among them. As these behaviours cannot be predicted or understood, the carers experience very complex and anguishing situations. To avoid subjective factors, Patel and Hope designed and validated a scale named RAGE that can be easily used. **OBJECTIVE.** Adaptation and validation of the RAGE Scale into Spanish. **PATIENTS AND METHODS:** The scale has been translated, and then retrotranslated to guarantee the semantic equivalence. Afterwards it has been tested on a group of 60 patients ( $n = 60$ ). All these patients followed the dementia criteria in DSM-IV and their behaviours were considered as relevantly aggressive by their carers. **RESULTS:** The total score reliability got an  $r = 0.93$  Spearman coefficient. The internal consistency was determined by Cronbach's alpha (0.90) and the reliability test-retest, analysed by Cohen's kappa, obtained a range from 0.57 to 0.85. **CONCLUSIONS:** All these elements show similar data in comparison to the original scale validation and therefore this version can be considered adequate for Spanish speaking patients within the Spanish culture.

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Gilaberte I; Montejo AL; de la Gandara J; Perez-Sola V; Bernardo M; Massana J; Martin-Santos R; Santiso A; Noguera R; Casais L; Perez-Camo V; Arias M; Judge R. Corporate Author(s): Fluoxetine Long-Term Study Group

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Fluoxetine in the prevention of depressive recurrences: a double-blind study.

J Clin Psychopharmacol, 2001 Aug; Vol. 21 (4), pp. 417-24.

Optimal outcomes from depression treatment are long-term recovery and, in the case of recurrent depression, prevention of new episodes. However, few data are available concerning the long-term efficacy of antidepressants in prophylactic treatment to prevent recurrences of depression. The efficacy and safety of fluoxetine 20 mg/day was evaluated in reducing the number of depressive episodes and in extending the time free of symptoms in patients with recurrent unipolar major depression. Patients with recurrent unipolar major depression according to DSM-III-R criteria and who responded to 32 weeks of open-label fluoxetine were randomly assigned to receive fluoxetine 20 mg/day (N = 70) or placebo (N = 70) for 48 weeks of double-blind maintenance treatment. Outcome measures were the percentage of recurrences and time to recurrence. Safety assessments included treatment-emergent adverse events, reasons for discontinuation, vital signs, and laboratory measures. Fluoxetine was associated with a statistically significantly smaller percentage of patients who had a recurrence compared with placebo (20% vs. 40%; chi2 analysis,  $p = 0.010$ ). The symptom-free period was significantly longer for patients treated with fluoxetine versus placebo

(295 vs. 192 days; Kaplan-Meier estimates, log-rank test,  $p = 0.002$ ). Treatments were well tolerated during maintenance treatment. The only statistically significant difference in adverse events between treatment groups was anxiety, which was more frequent in the placebo group (fluoxetine, 12.9% vs. placebo, 30%; chi2 analysis,  $p = 0.013$ ). Two placebo-treated patients and no fluoxetine-treated patients were withdrawn because of adverse events. In conclusion, fluoxetine at 20 mg/day was effective and well tolerated for the prophylactic treatment of recurrent unipolar major depression.

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[Serotonin receptor changes in depression: evidences and limitations]

Alteraciones de los receptores serotoninérgicos en la depresión: evidencias y limitaciones.

Actas Esp Psiquiatr, 2001 May-Jun; Vol. 29 (3), pp. 186-94.

Serotonin and serotonin receptors might be involved in the pathophysiology of depression. In the following, research data supporting the general hypothesis of adaptative changes in density and functioning of serotonergic receptors in depression are review. Binding assays, platelet and neuroendocrine studies supports this theory. The density of 5-HT<sub>2A</sub> binding sites in postmortem brain tissue of depressed patients and suicide victims, as well as in platelets of drug-free depressed patients has been found to be increased by several authors. The reduce hormonal response to fenfluramine challenge test in depression appears to indicate a sub-normal functioning of 5-HT<sub>2A</sub> receptors, however studies evaluating physiologic platelet 5-HT<sub>2A</sub> receptor-mediated responses have produced conflicting results. On the other hand, neuroendocrine challenges tests with 5-HT<sub>1A</sub> agonists suggest that presynaptic and postsynaptic 5-HT<sub>1A</sub> receptors may be also desensitized in depression. To date, postmortem receptor 5-HT<sub>1A</sub> studies in suicide victims have not yielded consistent. Taken together, these findings provide support for hypotheses of amine receptor abnormalities in depression, and indicate the need for expanded studies of amine receptor density and function in depression. Nevertheless, the role of these changes in the pathophysiology of depression has not been proved.

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Psychometric properties of the Temperament and Character Inventory (TCI) questionnaire in a Spanish psychiatric population.

Acta Psychiatr Scand, 2001 Feb; Vol. 103 (2), pp. 143-7.

OBJECTIVE: The psychometric properties of the Spanish version of Cloninger's Temperament and Character Inventory (TCI) were examined in a psychiatric population. METHOD: Internal consistency, factor structure and concurrent validity were studied in a sample of 416 psychiatric patients. RESULTS: A moderate to high internal consistency for all personality dimensions was found, except for Persistence. A confirmatory factor analysis of the TCI performed at the subscale level revealed an uncertain factor structure. However, when analysed separately, both the 11 temperament subscales (plus Persistence) and the 13 character subscales shaped four and three factors, respectively, in agreement with the biosocial model of personality. Finally, concurrent validity analyses were conducted using EPQ, SPSR and SSS questionnaires showing results consistent with theory. CONCLUSION: The Spanish version of the TCI is a reliable and valid instrument, although the Persistence dimension might require further revision.

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Subtyping of panic disorder patients with bradycardia.

Eur Psychiatry, 2001 Mar; Vol. 16 (2), pp. 109-14.

PURPOSE. Since clinical practice suggests that panic disorder may not be a homogeneous condition, a study was carried out to test the possible existence of different groups or subgroups of panic patients.

SUBJECTS AND METHODS. Thirty-two panic patients (DSM-III-R) underwent lactate challenge in our laboratory and were assessed for heart rate, blood pressure, sweating and Acute Panic Inventory. RESULTS. During the lactate challenge, patients complaining mainly of 'cardiorespiratory' symptoms (N = 12) showed tachycardia and localized sweating. Conversely, patients complaining mainly of 'pseudoneurological' symptoms (N = 16) showed bradycardia and generalized sweating. In both groups, Acute Panic Inventory scores were significantly higher during than before the panic attack, but the distribution of the scores was markedly different. DISCUSSION AND CONCLUSION. The results suggest that panic disorder may be a heterogeneous condition. Implications of these results to other phobic disorders, to Klein's false suffocation alarm theory and to the 'extended amygdala model' are discussed.

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Effectiveness of CPAP treatment in daytime function in sleep apnea syndrome: a randomized controlled study with an optimized placebo.

Am J Respir Crit Care Med, 2001 Aug 15; Vol. 164 (4), pp. 608-13.

Application of continuous positive airway pressure (CPAP) as the standard treatment for sleep apnea/hypopnea syndrome (SAHS) is a moot point. Studies on the effectiveness of this treatment have been challenged because of the lack of a suitable placebo. The recent description of a true placebo (sham CPAP) prompted us to conduct a randomized trial of CPAP or placebo to assess the effectiveness of CPAP in improving SAHS-related symptoms and daytime function in patients with moderate to severe SAHS. Forty-eight patients, stratified in four groups according to severity, were randomly allocated into two treatment groups (optimal and sham CPAP) for a 6-wk period. Of these, 45 completed follow-up (91% males; age: 54 +/- 10 yr; body mass index [BMI]: 32 +/- 6 kg/m<sup>2</sup>); apnea-hypopnea index [AHI]: 54 +/- 19 events/h; and Epworth Sleepiness Scale [ESS]: 16 +/- 5). The ESS, a questionnaire on SAHS-related symptoms, Functional Outcomes Sleep Questionnaire (FOSQ), and the Short Form Health Survey (SF-36) were completed at inclusion and after treatment. After 10 d of washout, the placebo group was treated with optimal CPAP and reassessed before and after optimal CPAP. The group receiving optimal CPAP when compared with the group with sham CPAP showed considerably greater improvement in the relief of sleepiness (-9.5 versus -2.3,  $p < 0.001$ ), other SAHS-related symptoms (-18.5 versus -4.5,  $p < 0.001$ ), vigilance (+8.5 versus +3.4,  $p = 0.009$ ), and general productivity (+4.0 versus +0.5,  $p = 0.04$ ) FOSQ scales. Both groups used a similar number of hours for the optimal and the sham CPAP (4.3 versus 4.5,  $p = \text{NS}$ ). The patients initially treated with placebo CPAP improved significantly more when optimal CPAP was applied for ESS (-2.3 versus -6.7,  $p < 0.001$ ) and other sleep apnea syndrome (SAS)-related symptoms (-4.5 versus -11.2,  $p = 0.02$ ). Our study provides strong evidence of the effectiveness of CPAP treatment in improving symptoms and perceived health status in moderate to severe SAHS.

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Citalopram versus nortriptyline in late-life depression: a 12-week randomized single-blind study.

Acta Psychiatr Scand, 2001 Jun; Vol. 103 (6), pp. 435-40.

**OBJECTIVE:** The aim of this single-blind study was to examine the efficacy and tolerability of citalopram compared to nortriptyline in moderate to severe major depressive patients aged 60 years or over. **Method:** In- and out-patients (N=58) with unipolar major depression were randomized to 12-week flexible dose treatment with nortriptyline or citalopram. **RESULTS:** No significant differences between the number of drop-outs in either group were observed, but the autonomic side-effects were significantly higher for nortriptyline than for citalopram. A significantly higher remission rate to nortriptyline than to citalopram was demonstrated, particularly if severe patients (endogenous or psychotic patients) were assessed. **CONCLUSION:** The remission rate to a therapeutic plasma level of nortriptyline appears to be higher than the remission rate to a standard dose of citalopram in a group of elderly major depressed patients, especially those with endogenous or psychotic features. On the other hand, citalopram appears to be better tolerated.

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Frontal cerebral perfusion dysfunction in elderly late-onset major depression assessed by 99mTc-HMPAO SPECT.

Neuroimage, 2001 Jul; Vol. 14 (1 Pt 1), pp. 202-5.

Baseline regional cerebral blood flow of thirty unmedicated late-onset unipolar major depressed patients over the age of 60 years and 20 sex-, age-, and vascular risk factor-matched healthy controls was imaged with single photon emission computed tomography, using technetium-99m hexamethylpropylene amine oxime as a tracer. To avoid errors of diagnosis--in particular, confusion between major depression and organic cognitive impairment--only treatment responders were included in the final sample. Statistically significant differences were observed in both left and right anterior frontal regions, with reduced uptake in depressed patients; these differences were more pronounced in the left hemisphere. Among patients, there was no correlation between regional cerebral blood flow and the severity of baseline symptoms. Our results support the hypothesis that certain neuroanatomic regions of the central nervous system may be functionally involved in elderly unipolar major depression, particularly in the late-onset subgroup.

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[Delirium in a consultation liaison psychiatry unit of a general hospital]

Delirium en la interconsulta psiquiátrica de un hospital general.

Actas Esp Psiquiatr, 2001 May-Jun; Vol. 29 (3), pp. 159-64.

INTRODUCTION: Delirium is an organic mental disorder defined as a confusional state, attention deficit and disorganized thinking, with a fluctuating course and acute development. Underlying causes are numerous, but the most common are multiple medical problems and drug side effects. SUBJECTS AND METHOD: We present a descriptive and transversal study of 62 inpatients with delirium diagnosis (ICD-10 criteria) attended by a Liaison Psychiatric Department in a General Hospital during a year. The data included demographic, somatic and psychiatric variables. RESULTS: The overall referral rate from the general hospital was 0.2%. No significant differences, were found in sex distribution. The age average was 64.46 years. The majority of patients were referred by Surgery (19.4%) and Medicine (17.7%). The most common medical diagnosis was cancer (25%) and respiratory failure (15.9%). Haloperidol was the most frequent psychiatric treatment. The greatest number of referred patients were included in the serious medical state and the 23.9% of patients with delirium diagnosis deceased. CONCLUSION: Data supports the statement that delirium is most often found in hospitalized patients with a diagnosis of cancer and respiratory failure, and that this diagnosis is associated with mortality in a high proportion. Furthermore, this study suggest an increase in cost-containment since the average stay are increased in comparison with the rest of hospitalized patients.

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Deficit in schizophrenia: the relationship between negative symptoms and neurocognition.

Compr Psychiatry, 2001 Jan-Feb; Vol. 42 (1), pp. 64-9.

The aim of the study was to analyze the role of clinical and neuropsychological variables in the psychosocial functioning and evolution of negative schizophrenia. We examined a sample of 49 negative schizophrenic outpatients who were pharmacologically stabilized. The subjects were evaluated clinically with the Positive and Negative Syndrome Scale (PANSS) and the Schedule for Affective Disorders and Schizophrenia (SADS), and neuropsychologically with a broad neuropsychological test battery. The correlations between all of the variables were studied and their predictive capacity assessed by linear regression methods. When the neuropsychological impairment criterion was established, we were able to distinguish two groups of patients with similar psychopathologies, but different neuropsychological and prognostic characteristics. Schizophrenic patients with neuropsychological impairment showed worse prognosis, worse evolution, and worse psychosocial adaptation than nonneuropsychologically impaired schizophrenics. Cognitive variables are statistically good predictors of evolution, prognosis, and adaptation. In conclusion, the negative syndrome of schizophrenia is neuropsychologically heterogeneous. Although negative patients present a similar clinical profile, their neuropsychological and prognostic characteristics may differ.

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Subtypes of memory dysfunction associated with ECT: characteristics and neurobiological bases.

J ECT, 2001 Jun; Vol. 17 (2), pp. 129-35.

Electroconvulsive therapy (ECT) is an effective treatment for a variety of psychiatric syndromes. However, one of its adverse secondary effects is neurocognitive dysfunction. The aim of this paper is to review different subtypes of memory dysfunction associated with ECT from a neuropsychological perspective. Declarative memory is clearly impaired after ECT. Immediate memory, however, is broadly preserved. Few studies have addressed procedural and incidental memory. Selective memory is impaired, probably due to the disruption of specific brain regions. Some of the possible neurobiological bases of ECT memory dysfunction are discussed in this paper. Synaptic plasticity, the cerebral neurotransmission system, and cerebral metabolism are examined in relation to the dysfunction and subsequent recovery of each memory subtype.

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[Alexithymia and verbal intelligence: a psychometric study]

Alexitimia e inteligencia verbal: un estudio psicométrico.

Actas Esp Psiquiatr, 2001 Sep-Oct; Vol. 29 (5), pp. 338-42.

INTRODUCTION: Alexithymia is a concept that describes the inability to put emotions into words and that has been associated with somatization and psychosomatic disorders. METHODS: A sample of 124 outpatients attending the Psychosomatic Unit of a General Hospital was studied in order to test the hypothesis that alexithymic patients have a significantly lower verbal intelligence than nonalexithymics. Alexithymia was assessed by the Toronto Alexithymia Scale (TAS), and verbal, nonverbal and general intelligence were measured by the WAIS. RESULTS: TAS scores were not related to medical and psychiatric diagnoses, and alexithymic patients (n: 53) showed not only significantly lower scores in verbal intelligence than undifferentiated subjects (n: 37) and nonalexithymics (n: 34) but also significantly lower scores in nonverbal and general intelligence. CONCLUSION: The results do not confirm our hypothesis and are discussed in relation to theories that consider alexithymia as a consequence of cerebral asymmetry and interhemispheric dysfunctions.

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Role of risperidone in bipolar II: an open 6-month study.

J Affect Disord, 2001 Dec; Vol. 67 (1-3), pp. 213-9.

Background: Since treatment approaches thought to be useful for mania are presumably suitable for hypomania as well, little systematic research has been done on the treatment of hypomanic episodes and their long-term outcome. As systematic trials have shown that the atypical antipsychotic risperidone may be effective and safe in the treatment of acute mania, we decided to conduct an open-label study of its effectiveness and tolerability in hypomania associated with bipolar II. Methods: Forty-four DSM-IV bipolar II patients with Young Mania Rating Scale (YMRS) scores above 7 were included and followed-up for 6 months. Efficacy was measured by means of the YMRS and the Clinical Global Impression for Bipolar Disorder (CGI-BD). Treatment-emergent depression was measured by the Hamilton Depression Rating Scale (HDRS-17), and the Udvalg for Kliniske Undersøgelser (UKU) subscale was used for neurological/extrapyramidal side-effects. Results: Thirty-four patients completed the trial. The mean dose of risperidone at endpoint was 2.8 mg/day. Last observation-carried-forward analysis showed significant reduction of YMRS scores from the first week of treatment, which continued until the endpoint ( $P < 0.0001$ ). At 6-month follow-up, 60% of patients were asymptomatic according to the CGI. The 32% who received risperidone in monotherapy seemed to respond equally well. Risperidone, as used in this study, appeared to be most protective against hypomanic than depressive recurrences. Nine patients (12%) had a depressive relapse during 6-month follow-up, one patient (2%) had a hypomanic relapse and another (2%) had both. No patients developed tardive dyskinesia during the duration of the study. Although most patients received risperidone in combination with standard mood-stabilizers, only three patients discontinued risperidone because of other side-effects. Limitations: In the absence of a placebo arm, it is uncertain to what extent the foregoing results could be ascribed to spontaneous remission of bipolar II disorder. Conclusions: Risperidone, either in combination with mood-stabilizers or alone was well-tolerated in bipolar II patients, who presented in a hypomanic state, and appeared efficacious. Further controlled research on the role of atypical antipsychotics in the treatment of less-than-manic forms of bipolar illness is warranted.

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Olanzapine as long-term adjunctive therapy in treatment-resistant bipolar disorder.

J Clin Psychopharmacol, 2001 Oct; Vol. 21 (5), pp. 469-73.

The aim of this study was to estimate the long-term effectiveness of olanzapine as adjunctive therapy in patients with bipolar disorder who exhibited an inadequate response to mood stabilizers. Twenty-three Research Diagnostic Criteria (RDC) patients with bipolar I and II were assessed by means of the Schedule for Affective Disorders and Schizophrenia and entered if they gave their consent to participate. All of them had experienced frequent relapses, residual subsyndromal symptoms, and inadequate responses to other drugs, such as lithium, valproate, or carbamazepine. While maintaining other drugs, they all received open-label, increasing doses of olanzapine, until achieving clinical response. Other drugs were maintained. The patients were assessed several consecutive times from baseline to the endpoint with the Clinical Global Impressions (CGI) scale for use in bipolar illness. Records of recurrences, hospitalizations, and side effects were also collected. The last-observation-carried-forward analysis showed that there was a significant reduction of CGI scores after the introduction of olanzapine, either in manic symptoms ( $p = 0.0015$ ), depressive symptoms ( $p = 0.0063$ ), or global symptoms ( $p = 0.0003$ ). The most frequent adverse events were somnolence (17%) and weight gain (13%). The mean dose of olanzapine at the end of the 43-week follow-up was 8.1 mg/day. Olanzapine may be a useful medication for the long-term adjunctive treatment of patients with bipolar disorder who exhibit a poor response to mood stabilizers, such as lithium, valproate, or carbamazepine. These results suggest mood-stabilizing properties of olanzapine.

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Efficacy and safety of risperidone in the treatment of schizoaffective disorder: initial results from a large, multicenter surveillance study. Group for the Study of Risperidone in Affective Disorders (GSRAD).

J Clin Psychiatry, 2001 Aug; Vol. 62 (8), pp. 623-30.

**BACKGROUND:** An adequate therapy for psychotic disorders needs to be effective against mood as well as psychotic symptoms. Analyses of data from clinical trials of risperidone in schizophrenia and small open-label studies in mania suggest that risperidone may have this broad efficacy profile. We present data on a 6-week trial of risperidone for the treatment of schizoaffective disorder that was part of a larger, 6-month surveillance study of patients with affective disorders. **METHOD:** One hundred two patients suffering from schizoaffective disorder (DSM-IV or ICD-10) entered the trial. Inclusion criteria consisted of a current DSM-IV diagnosis of schizoaffective disorder, bipolar type; DSM-IV manic or mixed psychotic episode; and a Young Mania Rating Scale (YMRS) score  $> 7$  for a mixed episode ( $> 20$  for a manic episode). Assessments included the YMRS, the Positive and Negative Syndrome Scale (PANSS), the Hamilton Rating Scale for Depression (HAM-D), the 4-item Clinical Global Impressions (CGI) scale, and the UKU Side Effect Rating Scale subscale for neurologic side effects. For patients entering the study, open-label risperidone therapy was added to their existing regimens of mood-stabilizing treatments. Other antipsychotic drugs were not allowed. **RESULTS:** Ninety-five patients completed the 6-week trial. At week 6, the mean  $\pm$  SD dose of risperidone was  $4.7 \pm 2.5$  mg/day. The mean scores on the assessment scales at baseline and week 6 (unless otherwise stated) were as follows: YMRS, 22.7 and 4.7, an improvement of 18.0 points ( $p < .0001$ ); PANSS (at baseline and week 4), 74.1 and 54.2, an improvement of 19.9 points ( $p < .0001$ ); HAM-D, 14.0 and 7.4, an improvement of 6.6 points ( $p < .0001$ ); CGI (at baseline and week 4), 2.6 and 1.7, an improvement of 0.9 points ( $p < .0001$ ). At week 4, most patients had shown improvement in symptom severity, and 9.3% were completely symptom-free. There were no statistically significant differences between baseline and week 4 in the severity of extrapyramidal symptoms as measured by the UKU. Risperidone was well tolerated; side effects were few and generally mild. **CONCLUSION:** The results to date with risperidone indicate that it may have both antipsychotic and mood-stabilizing properties. Despite the limitations of the open-label design, the results indicate that risperidone is a safe and effective therapy in combination with mood-stabilizers for the treatment of patients with manic, hypomanic, and depressive symptoms of mixed episodes in schizoaffective disorder, bipolar type.

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Support from children, living arrangements, self-rated health and depressive symptoms of older people in Spain.

Int J Epidemiol, 2001 Oct; Vol. 30 (5), pp. 1090-9.

**OBJECTIVE:** To assess the association between emotional and instrumental support from children and living arrangements with the physical and mental health of older people in Spain. **METHODS:** A face-to-face home interview was carried out with 1284 community-dwelling people over 65 (response rate = 83%) randomly sampled according to an age- and sex-stratified sampling scheme in 1993 at Leganés (Spain). Close to 93% of the participants had children and 45% of them coresided with them. Depressive symptoms were assessed by the CES-D (Center for Epidemiologic study depression scale) and self-rated health (SRH) by a single-item question. Emotional support was measured with a six-item scale on affection and reciprocity. Instrumental support was assessed by help received from children in 17 activities of daily living. Four living arrangements were considered: Living with spouse only, living with a spouse and children, widower living alone, and widower living with children. **RESULTS:** Multivariate analysis controlling for age, gender, education and functional status showed that low emotional support and reception of instrumental aid were significantly associated with poor SRH. Being a widower and sharing living arrangements with children was associated with good SRH. Living arrangements modify some of the associations of support of children with SRH. Depressive symptoms were associated with low emotional support, reception of instrumental help and being a widower who did not share living arrangements with children. For widowers who do not cohabit with children, reception of instrumental aid is associated with low depressive symptomatology. **DISCUSSION:** Emotional support from children seems to play an important role in maintaining the physical and mental health of elderly people in Spain. Instrumental support is widely available. Coresidence with children is very common and it is associated with good self-perceived health and low prevalence of depressive symptoms in a culture where family interdependence is highly valued. Families should be protected and encouraged to continue care-giving through a variety of community services and respite care, adapted to their needs and preferences. Research should be undertaken to find more efficient ways to help family caregivers in the Mediterranean context.

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Wright P; Birkett M; David SR; Meehan K; Ferchland I; Alaka KJ; Saunders JC; Krueger J; Bradley P; San L; Bernardo M; Reinstein M; Breier A

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Double-blind, placebo-controlled comparison of intramuscular olanzapine and intramuscular haloperidol in the treatment of acute agitation in schizophrenia.

Am J Psychiatry, 2001 Jul; Vol. 158 (7), pp. 1149-51.

**OBJECTIVE:** The authors evaluated the comparative efficacy and safety of intramuscular olanzapine, intramuscular haloperidol, and intramuscular placebo for the treatment of acute agitation in schizophrenia. **METHOD:** Hospitalized patients with schizophrenia received one to three injections of intramuscular olanzapine, 10 mg, intramuscular haloperidol, 7.5 mg, or intramuscular placebo over a 24-hour period. Agitation was measured with the excited component of the Positive and Negative Syndrome Scale and two additional scales. **RESULTS:** According to scores on the excited component of the Positive and Negative Syndrome Scale, both intramuscular olanzapine and intramuscular haloperidol reduced agitation significantly more than intramuscular placebo 2 and 24 hours following the first injection. Intramuscular olanzapine reduced agitation significantly more than intramuscular haloperidol 15, 30, and 45 minutes following the first injection. No patients treated with intramuscular olanzapine experienced acute dystonia, compared with 7% of those who were treated with intramuscular haloperidol. No significant QT(c) interval changes were observed in any patients. **CONCLUSIONS:** Intramuscular olanzapine represents a rapid, effective, and safe treatment for acute agitation in schizophrenia.

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## 7.1. Subunitat de Psicobiologia Clínica

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Influence of smoking and gender on diurnal variations of heart rate reactivity in humans.

Neurosci Lett, 2001 Jan 12; Vol. 297 (2), pp. 109-12.

We evaluated the influence of smoking and gender on diurnal variations of heart rate reactivity during performance of two vigilance tasks (auditory and visual) and a working memory task. Heart rate was measured hourly (08:00-21:00 h) at rest and during performance tasks in 20 smokers (ten men, ten women) and 20 non-smokers (ten men, ten women). Smoking and gender influenced reactivity only at certain times, especially at the earliest and latest hours and during the post-lunch period. Smokers displayed major post-lunch interference and a pattern of lowered stress in the second half of the day. Women showed greater reactivity at the first daily recording, although their levels later became similar to the men's and were even lower. The statement that women are myocardial hyperreactors must be further investigated, as it seems women may take longer than men to adapt to a task.

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Gender differences in diurnal variations of subjective activation and mood.

Chronobiol Int, 2001 May; Vol. 18 (3), pp. 491-502.

This article evaluates the influence of gender on diurnal and postlunch period variations in subjective activation and mood. This topic is not often addressed in the literature; particularly, little attention has been paid to how biological rhythms might bias research results. We studied 40 university student volunteers (20 men, 20 women) aged 18 to 23 years old ( $X = 20.23$ ,  $SD = 1.03$ ); they responded to questions on eight unipolar visual analog scales every hour from 08:00 to 21:00. Gender differences were observed in both diurnal and postlunch variations for scales of positive activation (alertness, vigor); sleepiness, however, was only sensitive to diurnal variation, and weariness was sensitive only to a postlunch effect. Women displayed a morning-type pattern, with their optimal moment (11:00) coming 2h earlier than for men, and their activation ratings ranged more widely. The only mood scale that showed differences related to gender was that of happiness, for which women had a higher diurnal mean, a diurnal peak 2h earlier, and a less-intense postlunch effect. Endogenous control of rhythmic pattern appears to be less intense in women, probably due to the coexistence of circamensual rhythmicity, although environmental or sociocultural influences may play a modulating role. Chronopsychological gender differences in affective states should be studied further given the implication they have for the prevention and treatment of mood disorders.

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Effects of bilateral subthalamic stimulation on cognitive function in Parkinson disease.

Arch Neurol, 2001 Aug; Vol. 58 (8), pp. 1223-7.

BACKGROUND: Chronic bilateral subthalamic deep brain stimulation (STN-DBS) is known to improve motor function in patients with Parkinson disease (PD). However, the possible effects of STN-DBS on neuropsychological functions have been studied less. OBJECTIVE: To investigate the effects of STN-DBS on neuropsychological functions in PD. DESIGN: Before-after trial. PATIENTS AND METHODS: Fifteen consecutive patients were assessed before and 3 months after implantation of stimulators for STN-DBS (postsurgical assessment with the stimulators switched on). Both assessments were performed with patients in a drug-free condition. The neuropsychological battery consisted of tests measuring memory and visuospatial and frontal functions. RESULTS: The comparison between presurgical and postsurgical performance showed a moderate deterioration in verbal memory and prefrontal and visuospatial functions, and a moderate improvement in a prefrontal task and obsessive-compulsive traits. The motor state improved in all patients. CONCLUSION: Therapy with STN-DBS improves motor symptoms in PD without any clinically relevant neuropsychological deterioration.

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Obsessive-compulsive symptoms in Parkinson's disease.

J Neurol Neurosurg Psychiatry, 2001 Mar; Vol. 70 (3), pp. 394-6.

To systematically investigate obsessive-compulsive traits in Parkinson's disease, patients were administered the Maudsley obsessional-compulsive inventory (MOCI) and a modification of the Leyton obsessional inventory (LOI) to a sample of non-demented and non-depressed patients with Parkinson's disease. Patients with severe Parkinson's disease showed more obsessive traits than normal controls in MOCI and LOI total scores, and in the "checking", "doubting", and "cleaning" subscales of the MOCI. By contrast, patients with mild disease did not differ from controls. A significant correlation was found between severity and duration of illness and MOCI total score. These results support the involvement of basal ganglia in obsessive-compulsive symptomatology. As patients with mild Parkinson's disease did not differ from controls, obsessive-compulsive disorder does not seem to be directly related to the initial nigrostriatal dopaminergic deficiency which causes clinical Parkinson's disease symptomatology. The appearance of obsessive symptoms could be related to the subset of neurochemical changes taking place at the level of the basal ganglia circuitry as disease progresses.

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Visuospatial deficits in Parkinson's disease assessed by judgment of line orientation test: error analyses and practice effects.

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Clin Exp Neuropsychol 2001 Oct; 23 (5), pp. 592-8.

Abstract: The Benton's Judgment of Line Orientation (JLO) is one of the tests most frequently used to assess visuospatial function. The aim of the present study was to analyze qualitative errors in Parkinson's disease (PD) following the method described by Ska, Poissant, and Joannette (1990) and to determine possible practice effects of this test. The JLO was administered to 76 idiopathic PD patients and 76 matched normal controls. The analyses of errors showed several qualitative differences between groups. Parkinson's patients made a greater proportion of complex intraquadrant errors and horizontal line errors, while they showed fewer simple intraquadrant errors than controls. The JLO test was also administered twice in an interval of 20 min in a subsample of 25 PD patients and 25 normal controls. The results did not show significant differences between the two administrations, indicating that the test is free of practice effects. In conclusion, these data provide further evidence for the existence of visuospatial deficits in PD. Moreover, the JLO has proved to be an appropriate test for the assessment of the visuospatial function in patients who require a neuropsychological follow up.

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Ultradian and circadian body temperature and activity rhythms in chronic MPTP treated monkeys.

Neurophysiol Clin, 2001 Jun; Vol. 31 (3), pp. 161-70.

The body temperature and locomotor activity rhythms of seven 1-Methyl, 4-phenyl, 1,2,3,6-tetrahydropyridine (MPTP)-treated cynomolgous monkeys were registered over a week on two separate occasions over an interval of 2 months. Motor disability was absent in two animals and present in five: it was mild in one, moderate in two and severe in two. Both temperature and motor activity were recorded every minute using a radio telemetry system. Analysis of circadian rhythms revealed less robustness of the 24-hour circadian components of body temperature and locomotor activity with increasing motor impairment, and a fragmentation of the body temperature rhythm into 8 hour-period components. Both total activity and daytime activity correlated inversely with the degree of motor impairment. On the contrary, the monkeys did not show differences in night time activity. The proportions of variance accounted for by the body temperature and locomotor activity of 24 h + 12 h + 8 h components were correlated. Also, the average levels at which the circadian rhythm varies between body temperature and locomotor activity were correlated. The results were almost identical in the two 1-week recording sessions. The present study confirms individual differences in the vulnerability to MPTP of the nigrostriatal system of monkeys, suggesting that if a cumulative dose does not provoke stable motor alterations, this cumulative dose will not produce circadian body temperature and locomotor activity rhythm alterations either. Similarly, if a dose is able to produce motor impairment, this dose will also be able to produce circadian rhythm alterations.

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Auditory information processing during human sleep as revealed by event-related brain potentials.

Clin Neurophysiol, 2001 Nov; Vol. 112 (11), pp. 2031-45.

The main goal of this review is to elucidate up to what extent pre-attentive auditory information processing is affected during human sleep. Evidence from event-related brain potential (ERP) studies indicates that auditory information processing is selectively affected, even at early phases, across the different stages of sleep-wakefulness continuum. According to these studies, 3 main conclusions are drawn: (1) the sleeping brain is able to automatically detect stimulus occurrence and trigger an orienting response towards that stimulus if its degree of novelty is large; (2) auditory stimuli are represented in the auditory system and maintained for a period of time in sensory memory, making the automatic-change detection during sleep possible; and (3) there are specific brain mechanisms (sleep-specific ERP components associated with the presence of vertex waves and K-complexes) by which information processing can be improved during non-rapid eye movement sleep. However, the remarkably affected amplitude and latency of the waking-ERPs during the different stages of sleep suggests deficits in the building and maintenance of a neural representation of the stimulus as well as in the process by which neural events lead to an orienting response toward such a stimulus. The deactivation of areas in the dorsolateral pre-frontal cortex during sleep contributing to the generation of these ERP components is hypothesized to be one of the main causes for the attenuated amplitude of these ERPs during human sleep.

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Bartrés-Faz D; Junqué C; Clemente IC; Serra-Grabulosa JM;Guardia J; López-Alomar A; Sánchez-Aldeguer J; Mercader JM; Bargalló N; Olondo M; Moral P

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MRI and genetic correlates of cognitive function in elders with memory impairment.

Neurobiol Aging, 2001 May-Jun; Vol. 22 (3), pp. 449-59.

The present study investigated the relationship between genetic variation, MRI measurements and neuropsychological function in a sample of 58 elders exhibiting memory decline. In agreement with previous reports, we found that the epsilon4 allele of the apolipoprotein E (APOE) and the D allele of the angiotensin converting enzyme (ACE) polymorphisms negatively modulated the cognitive performance. Further, we found an association between the A allele of the apolipoprotein C1 (APOC1) polymorphism and poorer memory and frontal lobe function. No clear associations emerged between MRI measures of white matter lesions (WML) or hippocampal sulcal cavities (HSC) and the cognitive performance after controlling for age effects. Further, the degree of WML or HSC lesions was in general not predisposed genetically except for the presence of the A allele of the APOC1 polymorphism that was related to a higher severity of HSC scores. Our results suggest that WML or HSC do not represent important brain correlates of genetic influences on cognitive performance in memory impaired subjects.

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Bartrés-Faz D; Clemente IC; Junqué C; Valveny N; López-Alomar A; Sánchez-Aldeguer J; López-Guillén A; Moral P

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APOE and APOC1 genetic polymorphisms in age-associated memory impairment.  
*Neurogenetics*, 2001 Oct; Vol. 3 (4), pp. 215-9.

We studied the distribution of two genetic polymorphisms (APOE and APOC1) in a sample of 100 subjects fulfilling the NIMH criteria for age-associated memory impairment (AAMI) and 124 controls. We found significant associations both for APOE and APOC1 loci and their combinations with the AAMI condition. The findings in our sample suggest that memory-impaired subjects as described by the NIMH may be genetically differentiated from normally aging subjects in relation to these two polymorphisms and indicate the interest of considering variations in the APOC1 gene for further studies in cognitive aging.

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[White matter changes and cognitive performance in aging]

Transliterated Title: Cambios en la sustancia blanca y rendimiento cognitivo en el envejecimiento.

*Rev Neurol*, 2001 Aug 16-31; Vol. 33 (4), pp. 347-53.

**OBJECTIVE:** In this paper we review the main magnetic resonance studies to show a possible relationship between changes in the white matter of the brain or leukoaraiosis, and the neuropsychological profile of elderly persons without dementia. **DEVELOPMENT:** The articles published to date show contradictory data, and in nearly half the cases reviewed no clear relationship could be established between leukoaraiosis and conduct. However, by using sensitive cognitive tests it is possible to detect and association between the presence and degree of change in the white matter and decline in frontal function such as speed of processing information, visuomotor function, verbal fluency, classification and mental sequences. Other cognitive areas such as language, memory or visuospatial, visuoconstructive and visuoperceptive functions appear less frequently related to the presence or intensity of lesions of the white matter of the brain. From a neuropsychological point of view, periventricular localization of the leukoaraiosis seems to be more important than subcortical localization. **CONCLUSIONS:** The neuropsychological functions most frequently associated with the presence of leukoaraiosis are those dependent on the frontal lobes, and are a disconnection favoured by the presence of the white matter of the brain, the most probable underlying physiopathological mechanism. Although there is evidence showing a genetic effect in the appearance of the white matter of the brain, study of the genes associated with cognitive deterioration in normal ageing has not given conclusive findings.

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Neuropsychological and genetic differences between age-associated memory impairment and mild cognitive impairment entities.

J Am Geriatr Soc, 2001 Jul; Vol. 49 (7), pp. 985-90.

**OBJECTIVE:** To neuropsychologically and genetically compare age-associated memory impairment (AAMI) and mild cognitive impairment (MCI) entities and to determine what proportion of AAMI diagnosed individuals could also receive a MCI diagnosis. To compare the distribution of a previously known genetic risk factor for Alzheimer's disease (apolipoprotein E common polymorphism) associated with these two conditions with a sample of the normal aging. **DESIGN:** Neuropsychological and genetic assessments in AAMI and MCI individuals. Genetic assessment in AAMI, MCI, and control subjects. **SETTING:** General health centers and geriatric homes from northeastern Spain (Catalunya). **PARTICIPANTS:** One hundred and four subjects presenting subjective memory complaints were selected and the AAMI and MCI criteria were applied. One hundred and twenty-four healthy Spanish subjects age 50 and older were defined as controls. **MEASUREMENTS:** Memory, language, and frontal lobe functions were assessed using standard neuropsychological tests. The apolipoprotein E (apo E) polymorphism was obtained by using polymerase chain reaction (PCR) and HhaI restriction endonuclease. **RESULTS:** Sixty-seven percent of previously diagnosed AAMI individuals could also be identified as MCI subjects. These MCI cases differed from those only-AAMI individuals both in neuropsychological and genetic analyses, performing worse not only on memory but also on language and frontal lobe tests and presenting high and low prevalences of the apo E epsilon 3/epsilon 4 and epsilon 3/epsilon 3 genotypes, respectively. The general AAMI sample of 93 individuals also differed from controls in the apo E genotype and allele distributions but these differences were no longer present after subtracting the MCI cases (63 subjects). These findings reflect that the differences between the memory impaired sample and the control sample regarding the apo E polymorphism were mainly attributable to MCI individuals and not to those who received only a diagnosis of AAMI alone. **CONCLUSIONS:** Our findings suggest that among AAMI subjects, those who also fulfill the MCI criteria present a neuropsychological and genetic profile closer to that previously related to Alzheimer's disease than those individuals only eligible for a diagnosis of AAMI. However, our findings also suggest that using only the AAMI criteria still appears to select a population that differs genetically from the normal older population.

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Electrical responses reveal the temporal dynamics of brain events during involuntary attention switching.

Eur J Neurosci, 2001 Sep; Vol. 14 (5), pp. 877-83.

Surviving in the natural environment requires the rapid switching of attention among potentially relevant stimuli. We studied electrophysiologically the involuntary switching time in humans performing a task designed to study brain mechanisms of involuntary attention and distraction (C. Escera et al., 1998, J. Cogn. Neurosci., 10, 590-604). Ten subjects were instructed to discriminate visual stimuli preceded by a task-irrelevant sound, this being either a repetitive tone ( $P = 0.8$ ) or a distracting sound, i.e. a slightly higher deviant tone ( $P = 0.1$ ) or an environmental novel sound ( $P = 0.1$ ). In different conditions, the sounds preceded the visual stimuli by 245 or 355 ms. Deviant tones and novel sounds prolonged reaction times significantly to subsequent visual stimuli by 7.4 ( $P < 0.02$ ) and 15.2 ms ( $P < 0.003$ ), respectively. In addition to a mismatch negativity (MMN) and a positive-polarity, 320-ms latency, P3a event-related potential associated, respectively, with detection of the distracting sound and the subsequent orienting of attention to it, a late frontal negative deflection was observed in distracting trials. The peak latency of this brain response from sound onset was 580 ms in the 245-ms condition and 115 ms longer in the 355-ms condition ( $P < 0.001$ ), peaking consequently at 340 ms from visual stimulus onset, irrespective of the onset of the distracting sound. We suggest that this late frontal negative response may signal over the scalp the process of reallocating attention back to the original task after momentary distraction, and therefore that recovering from distraction may take a similar shifting time as orienting attention involuntarily towards unexpected novelty.

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Bulimia nervosa and misuse of orlistat: two case reports.

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Int J Eat Disord 2001 Dec; 30 (4), pp. 458-61.

Abstract:OBJECTIVE: Orlistat (tetrahydrolipstatin) is an intestinal lipase inhibitor that was approved recently for the management and treatment of obesity. This is the first report of the misuse of orlistat in two normal-weight purging bulimia nervosa (BN) patients. METHOD AND RESULTS We report two diagnosed cases of BN in two Spanish women who used orlistat as a purging mechanism after binge episodes. In both cases, the onset of the eating disorder was in adolescence. From the beginning, a restrictive diet, bingeing, and purging behavior (vomiting and using laxatives) were present. Both patients misused this substance as their only purging mechanism after every binge episode. CONCLUSION: BN patients have used many substances and bizarre behaviors as purging mechanisms. Nevertheless, to the authors' knowledge, these are the first reported cases of orlistat misuse as the only purging mechanism in two BN patients.

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Binge eating disorder onset by unusual parasitic intestinal disease: a case-report.

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Int J Eat Disord 2001 Jul; 30 (1), pp. 107-9.

Abstract: We report a case of binge eating disorder (BED) in a 19-year-old Spanish woman, whose onset followed a nowadays uncommon parasitic intestinal disease (*Taenia solium* by cysticercosis). The patient exhibited bizarre and frequent hyperphagia episodes and extreme loss of weight, common symptoms of this condition. The patient continued to have frequent binge episodes and inappropriate eating patterns, gaining weight consequently over a normal range, despite successful treatment of the condition. No purging behavior was detected. A classical conditioning behavioral model, was useful for the understanding and formulation of this case. To the authors' knowledge, this is the first reported case where a parasitic infestation triggered the onset of BED.

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Auditory sensory memory as indicated by mismatch negativity in chronic alcoholism.

Clin Neurophysiol, 2001 May; Vol. 112 (5), pp. 728-31.

OBJECTIVES: A pre-conscious auditory sensory (echoic) memory of about 10 s duration can be studied with the event-related brain potential mismatch negativity (MMN). Previous work indicates that this memory is preserved in abstinent chronic alcoholics for a duration of up to 2 s. The authors' aim was to determine the integrity of auditory sensory memory as indexed by MMN in chronic alcoholism, when this memory has to be functionally active for a longer period of time. METHODS: The presence of MMN for stimuli that differ in duration was tested at memory probe intervals (MPIs) of 0.4 and 5.0 s in 17 abstinent chronic alcoholic patients and in 17 healthy age-matched control subjects. RESULTS: MMN was similar in alcoholics and controls when the MPI was 0.4 s, whereas MMN could not be observed in the patients when the MPI was increased to 5.0 s. CONCLUSIONS: These results provide evidence of an impairment of auditory sensory memory in abstinent chronic alcoholics, whereas the automatic stimulus-change detector mechanism, involved in MMN generation, is preserved.

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Brain activity index of distractibility in normal school-age children.

Neurosci Lett, 2001 Nov 16; Vol. 314 (3), pp. 147-50.

Abstract: Children's attention is easily diverted from a current activity to a new event in the environment. This was indexed in school-age children by diminished performance speed and accuracy in a visual discrimination task caused by task-irrelevant novel sounds. Event-related brain potentials (ERPs) elicited by these distracting sounds showed a prominent positive deflection that was generated by brain processes associated with involuntary switching of attention to novel sounds. Recordings of the magnetoencephalographic (MEG) counterpart of this brain activity revealed a major bilateral generator source in the superior temporal cortex. However, ERP scalp distributions indicated also overlapping brain activity generated in other brain areas involved in involuntary attention switching. Moreover, differences in ERP amplitudes and in their correlations with the reaction times between younger (7-10 years) and older (11-13 years) children indicated developmental changes in attentional brain functions.

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Impairment of incidental memory for frequency in patients with obsessive-compulsive disorder.

Psychiatry Res, 2001 Nov 30; Vol. 104 (3), pp. 213-20.

The aim of our study was to investigate whether patients with obsessive-compulsive disorder (OCD) have impaired incidental memory for frequency. Fifty-four subjects (27 OCD patients and 27 matched control subjects) performed a task assessing estimation of occurrence of previously heard words. Performance on this task was compared with other intentional verbal memory tasks (recognition, recall and learning of common words). We also correlated memory for frequency with frontal lobe tests (Wisconsin Card Sorting Test, Trail Making Tests A and B, and verbal fluency). Performance on incidental learning of frequency was significantly worse in the OCD group than in control subjects. Other verbal memory measures did not show significant differences. Performance in the frequency task correlated with verbal fluency. Although intentional verbal memories are normal in OCD patients, incidental memory for frequency is impaired, suggesting that prefrontal systems are involved in OCD.

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Neuropsychological long-term sequelae of perinatal asphyxia.

Brain Inj, 2001 Dec; Vol. 15 (12), pp. 1029-39.

OBJECTIVE: To investigate the long-term neuropsychological consequences of perinatal asphyxia (PA). METHODS: A group of adolescents were assessed with antecedents of mild (n = 8) and moderate (n = 20) PA, and a matched group of 28 healthy adolescents as a control group. Neuropsychological assessment included tests of memory, perceptual-motor skills, and frontal lobe functions, because these are areas of cognitive functioning susceptible to hypoxic conditions. RESULTS: Subjects with moderate PA showed significant differences from the control group on tests related to delayed recall for both verbal and visual information, perceptual-motor speed, and tests assessing attention and executive functions. Conversely, subjects in the mild PA group exhibited scores which were similar to those of the control group in all the assessed variables. CONCLUSION: The present findings demonstrate that subtle but persistent neuropsychological deficits were observed in adolescents with antecedents of moderate PA, but not in those classified with mild asphyxia.

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(1)H-MR spectroscopy is sensitive to subtle effects of perinatal asphyxia.

Neurology, 2001 Sep 25; Vol. 57 (6), pp. 1115-8.

The authors performed neuropsychological and (1)H-MRS studies in 18 subclinical patients with antecedents of perinatal asphyxia (PA) and in 18 matched control subjects. Patients with PA showed reduced values of N-acetylaspartate (NAA) in both the basal ganglia and the midtemporal region (MTR) and reduced NAA/choline values in the MTR. Neuropsychological testing showed group differences in tasks related to attention and memory. These results indicate persistent dysfunctions in cerebral structures vulnerable to hypoxia and demonstrate the utility of MRS for the long-term evaluation of cerebral sequelae of neonatal asphyxia.

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Neuropsychological findings in congenital and acquired childhood hydrocephalus.

Neuropsychol Rev, 2001 Dec; Vol. 11 (4), pp. 169-78.

Hydrocephalus is an increase in cerebrospinal fluid volume that can be caused by a variety of etiologies. The most common congenital and acquired causes of hydrocephalus are spina bifida, aqueduct stenosis, and preterm low birthweight infants with ventricular hemorrhage. In general, the literature suggests mild neuropsychological deficits associated with hydrocephalus, which are predominant in visuospatial and motor functions, and other nonlanguage skills. Although the precise nature of the neuropsychological deficits in hydrocephalus are not completely known, several factors such as etiology, raised intracranial pressure, ventricular size, and changes in gray and white matter tissue composition as well as shunt treatment complications have been shown to influence cognition. In fact, the presence of complications and other brain abnormalities in addition to hydrocephalus such as infections, trauma, intraventricular hemorrhage, low birthweight, and asphyxia are important determinants of the ultimate cognitive status, placing the child at a high risk of cognitive impairment.

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Neuropsychological outcome in relation to the traumatic coma data bank classification of computed tomography imaging.

J Neurotrauma, 2001 Sep; Vol. 18 (9), pp. 869-79.

The Traumatic Coma Data Bank (TCDB) classification of CT(computed tomography) scan has been related to the general outcome and intracranial pressure evolution. Our aim was to analyse the relationship of this classification with neuropsychological outcome and late indices of ventricular dilatation. Fifty-seven patients with a moderate or severe head injury (mean admission Glasgow Coma Scale Score, 7.7) were studied from 122 consecutive cases. There were 49 males and 8 females (mean age, 27.7 years). Subjects were classified into TCDB categories on the basis of their most serious acute CT scan finding. From the last control CT scan image, performed at a mean of 6.12 months postinjury, several measures of ventricular dilatation were calculated. Neuropsychological assessment at 6-month included tests of verbal and visual memory, visuoconstructive functions, fine motor speed, and frontal lobe functions. Patients with diffuse injury type I showed better neuropsychological outcome than patients with more severe diffuse injuries and those with mass lesions. Within the diffuse injury groups, the degree of diffuse damage was related to measures of verbal memory and attention and cognitive flexibility. Ventricular enlargement was more evident in patients with mass lesions and it decreased in the remaining groups as the severity of diffuse injury diminished. These results show that there is a relationship between acute intracranial lesion diagnosis according to TCDB classification and neuropsychological results and ventricular dilatation indices at 6 months postinjury.

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Long-term effects of bilateral frontal brain lesion: 60 years after injury with an iron bar.

Arch Neurol, 2001 Jul; Vol. 58 (7), pp. 1139-42.

Abstract: BACKGROUND: Harlow's report of the case of Phineas P. Gage in 1848 was one of the earliest description of the personality and behavioral changes following frontal lobe damage. Since Harlow's articles, a few more case reports of frontal lobe damage have been published. As standard neuropsychological and neurologic evaluations may reveal subtle defects, case reports have been particularly useful in characterizing the behavioral changes that follow frontal lobe damage. OBJECTIVE: To describe the long-term outcome of an 81-year-old patient who sustained a severe frontal brain lesion 60 years ago caused by the passage of an iron spike through his head. RESULTS: The patient has bilateral damage affecting the orbital and dorsolateral frontal regions. He displays many of the typical frontal behavioral disturbances described in the literature. His conduct is characterized by dependence on others, cheerfulness, planning difficulties, problems establishing realistic goals, lack of drive, and difficulties in initiating, continuing, and finishing activities. Although gross cognitive functioning is intact, neuropsychological deficits are present in the executive functioning, memory, and visuoconstructive domains. CONCLUSIONS: In contrast with the antisocial conduct pattern usually associated with frontal damage in the literature, this case suggests that large frontal lesions can produce behavioral and personality changes that are compatible with stable functioning in family, professional, and social settings. In addition to the localization of the lesion, many other factors should be considered in the long-term prognosis of frontal brain injured patients.

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Validation of the Spanish version of the Glasgow Dyspepsia Severity

Rev Esp Enferm Dig, 2001 Mar; Vol. 93 (3), pp. 164-75.

OBJECTIVE: To translate, adapt and validate the Spanish version of the Glasgow Dyspepsia Severity Score (GDSS). METHOD: The translation into Spanish and the adaptation of the scale was carried out by specialized medical translators. The comprehensibility of the translated scale was assessed by two independent observers and by the research team. GDSS includes eight items and was filled out once by 40 healthy subjects (control group) and twice by 131 patients with functional dyspepsia. After the first measurement, patients were prescribed a H2 blocker (roxatidine) for 2 months. A second evaluation was carried out 6 months after the beginning of the treatment. RESULTS: The comprehensibility of the questionnaire was good. It showed acceptable internal consistency both for the control group (0.6) and for the patients at the inclusion visit (0.6) and good consistency for the patients at the 6 month follow-up evaluation (0.8). After treatment, the overall score decreased almost to half ( $p <$  in the patients, thus confirming the effectiveness of the treatment 4 months after its discontinuation, although their score was still higher than the score of the control group ( $p < 0.001$ ). CONCLUSIONS: Results suggest the usefulness of including the GDSS scale in the dyspeptic symptoms recording protocols, since it allow to estimate, with appropriate objectivity and in an easy and quickly way, the degree of impairment due to dyspeptic symptoms, as well as the perception of well-being and the effectiveness of a given therapy.

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Effects of acoustic gradient noise from functional magnetic resonance imaging on auditory processing as reflected by event-related brain potentials.

Neuroimage, 2001 Jul; Vol. 14 (1 Pt 1), pp. 244-51.

The processing of sound changes and involuntary attention to them has been widely studied with event-related brain potentials (ERPs). Recently, functional magnetic resonance imaging (fMRI) has been applied to determine the neural mechanisms of involuntary attention and the sources of the corresponding ERP components. The gradient-coil switching noise from the MRI scanner, however, is a challenge to any experimental design using auditory stimuli. In the present study, the effects of MRI noise on ERPs associated with preattentive processing of sound changes and involuntary switching of attention to them were investigated. Auditory stimuli consisted of frequently presented "standard" sounds, infrequent, slightly higher "deviant" sounds, and infrequent natural "novel" sounds. The standard and deviant sounds were either sinusoidal tones or musical chords, in separate stimulus sequences. The mismatch negativity (MMN) ERP associated with preattentive sound change detection was elicited by the deviant and novel sounds and was not affected by the prerecorded background MRI noise (in comparison with the condition with no background noise). The succeeding positive P3a ERP responses associated with involuntary attention switching elicited by novel sounds were also not affected by the MRI noise. However, in ERPs to standard tones and chords, the P1, N1, and P2 peak latencies were significantly prolonged by the MRI noise. Moreover, the amplitude of the subsequent "exogenous" N2 to the standard sounds was significantly attenuated by the presence of MRI noise. In conclusion, the present results suggest that in fMRI the background noise does not interfere with the imaging of auditory processing related to involuntary attention.

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The effect of medial frontal and posterior parietal demyelinating lesions on stroop interference.

Neuroimage, 2001 Jan; Vol. 13 (1), pp. 68-75.

Functional imaging has consistently shown that attention-related areas of medial frontal and posterior parietal cortices are active during the attentional conflict induced by color naming in the presence of distracting words (Stroop task). Such studies, however, have provided few details of the correlational nature between observed regional brain activations and reaction time delay occurring in this situation. We analyzed the effect of medial frontal and posterior parietal lesions on the Stroop response in a group of patients with multiple sclerosis, a neurological disorder in which Stroop response speed is affected to varying degrees. Forty-five patients were assessed using a computer-presented verbal version of the Stroop task and specific MRI protocol. Demyelination areas were measured on five anatomical divisions of the medial frontal white matter and on white matter of the posterior parietal lobe. We found that a combination of frontal and parietal lesion measurements accounted for 45% of the Stroop interference time variance. Patients with more right frontal than left parietal demyelination showed slowed Stroop responses, whereas the predominance of lesions in the left posterior parietal region was associated with a reduced Stroop interference. These results may contribute to defining the specific participation of these attention-related brain areas in the conflict of attention represented by the Stroop paradigm. They also help to explain the variability of the Stroop effect in multiple sclerosis patients and suggest that the Stroop test does not assess just a single cognitive operation, but rather the combined effect of anatomically segregated neural processes.

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The H1-receptor antagonist dextro-chlorpheniramine impairs selective auditory attention in the absence of subjective awareness of this impairment.

J Clin Psychopharmacol, 2001 Dec; Vol. 21 (6), pp. 599-602.

Although previous studies have shown that the human attention system is partially affected by chlorpheniramine, the effects of chlorpheniramine on human auditory selective attention have not yet been explored. This study examines the effects of a single dose of 4 mg of dextro-chlorpheniramine on human auditory selective attention by means of the evaluation of the event-related brain potential (ERP) processing negativity (PN). The study sample consisted of 20 healthy male humans, who received either a single 4-mg dose of dextro-chlorpheniramine or a placebo in a double-blind design. The subjects were given a dichotic listening task, in which they were instructed to press a response button upon detecting deviant tones (target) while their ERPs were recorded. In parallel, subjective tests evaluated the daytime sleepiness, overall vigor, and affect of the subjects. Results showed that the auditory selective attention is impaired under the effects of chlorpheniramine, as reflected by an attenuation of PN amplitude and by a decrease of performance in the group of subjects who took a single 4-mg dose of dextro-chlorpheniramine. No subjective change in the daytime sleepiness, overall vigor, or affect of the subjects was observed. This lack of conscious awareness of the side effects may lead to situations of risk in tasks for which auditory information is important, because no subjective indicators of attention impairment are available to the subjects.

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[Study of the long term sequelae of traumatic brain injury: evaluation of declarative and procedural memory, and its neuroanatomic substrate]

Estudio de las secuelas a largo plazo de los traumatismos craneoencefálicos: evaluación de la memoria declarativa y procedimental y de su sustrato neuroanatómico.

Rev Neurol, 2001 Jul 1-15; Vol. 33 (1), pp. 30-4.

**INTRODUCTION AND OBJECTIVES:** The hippocampus and the striatum have been proposed as respectively cerebral substrates of declarative and procedural memory. Both structures are vulnerable to traumatic brain injury. Although declarative and procedural memory have been reported to be impaired in traumatic brain injury (TBI), volumetric measures have so far failed to associate this impairment with atrophy of hippocampal and striatal structures. In our study, we investigated the profile of declarative and procedural memory in children who suffered from moderate to severe traumatic brain injury during childhood (injury test interval: 9.42+/-1.98 years). **PATIENTS AND METHODS:** Nineteen patients and matched controls were evaluated on tests of declarative memory and motor learning. Results showed that TBI subjects exhibit poorer performance in both tasks. Moreover, structural magnetic resonance images were obtained from TBI subjects. In order to relate neuropsychological performance with hippocampal and neostriatal volumetric data, correlation analyses were performed. **RESULTS:** Significant positive correlations were obtained between hippocampal volume and memory for objects. Striatal volume correlated positively with motor learning and with verbal memory. **CONCLUSIONS:** It thus seems that plasticity does not completely compensate for the memory deficits resultant from neural loss in the immature brain.

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Correlation of atrophy measures on MRI with neuropsychological sequelae in children and adolescents with traumatic brain injury.

Brain Inj, 2001 Mar; Vol. 15 (3), pp. 211-21.

To examine the relationship between neuropsychological sequelae and atrophy parameters from magnetic resonance imaging (MRI) following paediatric moderate-to-severe traumatic brain injury (TBI), 19 head injured children and adolescents were studied at least 6 years after injury. Three-dimensional MRI scans were obtained. A semi-automatic computerized method was used to estimate ventricular volumes and the corpus callosum area. Tests of intellectual, memory, visuospatial, frontal lobe, and motor speed functioning were administered to all patients and to 19 matched normal control subjects. Patients' performance significantly differed from controls in general intellectual function, visual memory, visuospatial and frontal lobe tests. The corpus callosum area correlated strongly with several measures involving processing speed and visuospatial function. Ventricular enlargement was less related to neuropsychological outcome. In conclusion, quantitative measurement of the corpus callosum on MRI reflects neuropsychological outcome better than ventricular dilation in paediatric patients.

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Activation of brain mechanisms of attention switching as a function of auditory frequency change.

Neuroreport, 2001 Dec 21; Vol. 12 (18), pp. 4093-7.

The activation of the cerebral network underlying involuntary attention switching was studied as a function of the magnitude of auditory change. Event-related brain potentials (ERPs) were recorded during the performance of a visual discrimination task in which task-irrelevant auditory frequency changes of six different levels (5%, 10%, 15%, 20%, 40% and 80%) occurred randomly within the same stimulus sequence. All the frequency changes elicited a typical ERP waveform, characterized by MMN, P3a and RON, their respective amplitudes increasing linearly as a function of the magnitude of change. The results indicate that attentional processes in the brain may follow a linear function of activation, contrasting with the well-established logarithmic functions underlying perceptual and psychophysical processes.

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Cerebral mechanisms underlying orienting of attention towards auditory frequency changes.

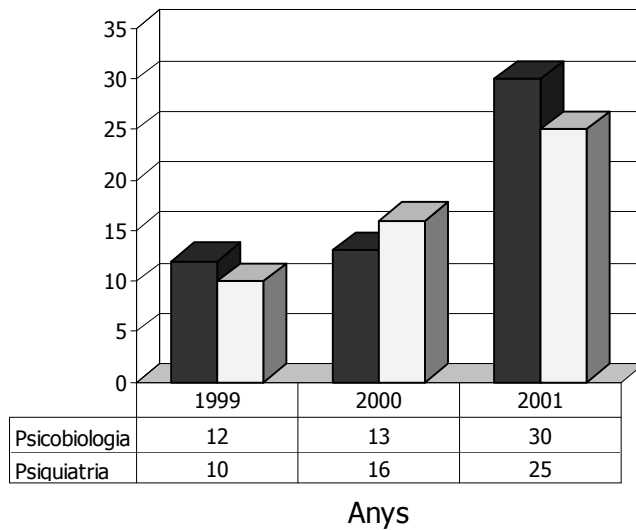
Neuroreport, 2001 Aug 8; Vol. 12 (11), pp. 2583-7.

Brain mechanisms underlying detection of auditory frequency changes were studied with event-related potentials (ERPs) in 14 human subjects discriminating visual stimuli. Scalp-current density mapping revealed bilateral components of mismatch negativity (MMN) in frontal and auditory cortices. Deviance-related activations in frontal and temporal cortex began to be significant at 94 ms and 154 ms in the right hemisphere, and at 128 ms and 132 ms in the left hemisphere. The magnitude of MMN-neuroelectric currents from the left temporal cortex correlated significantly ( $r = -0.56$ ,  $p < 0.05$ ) with distraction caused by MMN-eliciting deviant tones. These results suggest a complex cerebral circuitry involved in frequency change detection and strongly support the role of this circuitry in driving attention involuntarily towards potentially relevant frequency changes in the acoustic environment.

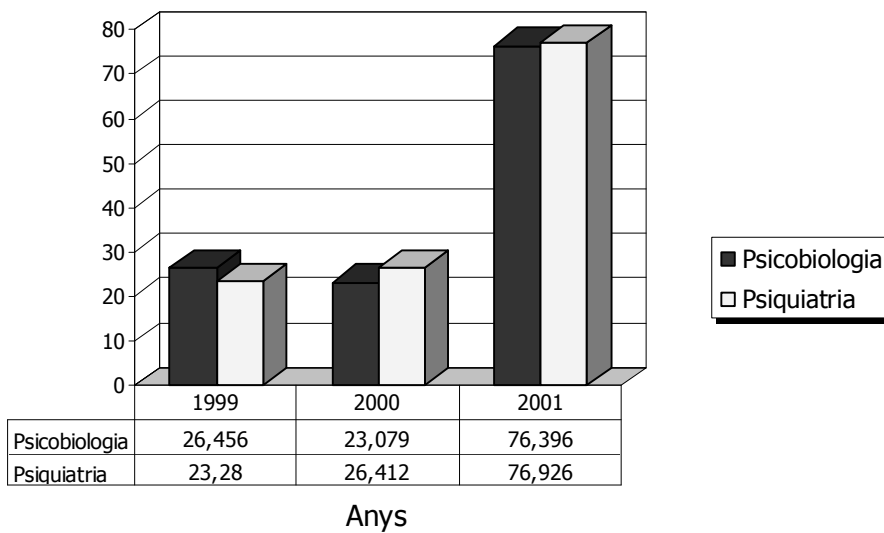
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**8. GRÀFIQUES DE PUBLICACIONS**

**Nombre total de publicacions amb FI**



**Suma total del FI**



**Mitjana del FI**

