Treatment of Monge’s disease: new developments

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Background. Monge’s disease or Chronic Mountain Sickness (CMS) is characterized by an excessive polycythemia, frequently associated with pulmonary hypertension, in high altitude dwellers. CMS has a considerable impact on public health in high altitude regions (prevalence of 5 to 18 % above 3,200 m). A preliminary study demonstrated the efficiency of acetazolamide (250 mg/day for 3 weeks) in reducing hematocrit. The efficacy and tolerance of a longer acetazolamide treatment that could be chronically implemented and the effects on pulmonary artery pressure are not known.

Methods. In a double blind placebo-controlled study performed at Cerro de Pasco, Peru (4,300 m), 40 patients were randomly assigned to receive 250mg acetazolamide, and 15 to receive placebo by daily oral administration for twelve weeks. Hematocrit, blood gases, clinical outcome and pulmonary artery pressure were evaluated.

Results. Acetazolamide decreased mean hematocrit from 69 to 64% (P<0.001) and increased arterial O₂ pressure and saturation from 42 to 45 mmHg and 82 to 84 % respectively (P<0.001). No severe adverse effect was recorded. Mean plasma bicarbonate and plasma potassium fell from 20.3 to 17.5 mmol/L (P<0.001) and 4.8 to 4.5 mmol/L (P<0.02). No hypokalemia was evidenced. Pulmonary hypertension was not reduced by the treatment.

Conclusions. Acetazolamide is efficient in reducing the level of polycythemia in Monge’s disease without adverse effects. Its implementation as a chronic treatment for this disease appears efficient, safe and low cost. (ClinicalTrials.gov number, NCT00424970)