P-171 - ALKAPTONURIA: NOT AN “ADULT DISEASE” ANYMORE - EARLY DIAGNOSIS FOR EARLY TREATMENT IS ESSENTIAL

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INTRODUCTION: Alkaptonuria is a rare metabolic disorder caused by mutations in the HGO gene leading to deficiency of homogentisate 1,2-dioxygenase enzyme. It results in an accumulation of homogentisic acid (HGA) which oxidizes spontaneously to benzoquinone acetate, a highly oxidant compound, in an process called ochronosis. OBJECTIVES: To report two patients with alkaptonuria and their different outcomes

METHODS: Clinical, biochemical and imaging data retrospective analysis of two Brazilian patients with Alkakaptonuria diagnosed in different clinical settings

RESULTS: Patient 1, male, nine years old referred for evaluation of “congenital porphyria” due to abnormal urine staining observed in his diapers since 1 year and 6 months. At 3 years of age, the diagnostic was confirmed by detection of massive increase of homogentisic acid (HGA) in urine. Molecular examination was later performed, showing compound heterozygous mutations in HGO gene. Patient did not show any findings of skin ochronosis. Further assessment of the patient with abdominal ultrasound, echocardiogram, kidney function revealed early mitral valve thickening.

Patient 2, male, 71 years old referred with 66 years for evaluation of peripheral neuropathy. Initial symptoms were pain and stiffening of the fingers with slow progression, associated with paresthesia (in median nerve territory) and Raynaud phenomena. In this period, were noted hyperchromic punctate lesions on the first and second fingers. His physical examination showed black hyperchromic spots on hands, face, ears, and sclera of both eyes. Patient was unable to walk anymore due to severe hip dysplasia (had bilateral prosthetic hip and knee replacement in the past). Eletroneuromiography was compatible with severe bilateral carpal tunnel syndrome and magnetic resonance imaging of wrists showed bilateral tendon ruptures. Diagnosis was confirmed with HGA elevation in urine.

Further assessment showed aortic insufficiency of moderate degree and both colelithiasis and nephrolithiasis. CONCLUSIONS: Alkaptonuria, also called endogenous ochronosis, is a rare metabolic autosomal recessive disease, which affects 1: 1,000,000 live births. A potential treatment with nitisinone has been proposed, because it inhibits the enzyme 4-hydroxyphenylpyruvate dioxygenase and decreases formation of HGA. Early disease recognition is necessary to better start patients follow-up and discuss therapeutic possibilities before irreversible organ damage.