P-166 - PATIENTS WITH TYROSINEMIA TYPE I TREATED AT A HIGH COMPLEXITY PEDIATRIC HOSPITAL IN ARGENTINA: A RETROSPECTIVE STUDY

Bindi V, Martinez M, Eiroa HD
Juan Pedro Garrahan; Cuidad Autónoma de Buenos Aires; Argentina

INTRODUCTION: Hereditary tyrosinemia type 1 (HT1) is a rare inborn error of tyrosine metabolism which can be a fatal disorder without treatment. Early treatment may prevent acute liver failure, renal dysfunction, liver cirrhosis, hepatocellular carcinoma (HCC) and improves survival. Neurocognitive development can be impaired in some cases but the reason remains unclear. OBJECTIVES: To characterize clinical and laboratory features present at diagnosis and follow up in a cohort of patients HT1. To describe the appearance of complications. PATIENTS AND METHODS: We reviewed medical records (January 1990-June 2018) of 10 patients diagnosed and/or followed at Garrahan hospital. RESULTS: From 10 patients, two were born before nitisinone became available and died from HCC. One received liver transplant. Six patients had a family history of dead siblings. Median age at symptoms was 6 months (1-36), median age at diagnosis was 8.5 months (4 days-40m). The clinical features at diagnosis included: liver(4), renal tubular dysfunction(4), acute liver failure(4), hepatic tumors(5), cardiomyopathy(2) and none(1). Median values of alpha-fetoprotein were 151309.5 ng/ml (range 23703-1499489) and normalized within the first year of therapy (except in 3 patients). Median follow up time were 10.5 years (5 months-16 years). Average delayed nitisinone treatment was 3 months (0-5m). The other patient who underwent liver transplant for suspected HCC at 1 year has good outcome with renal involvement 6 years later. The most common long term complication was impaired neurocognitive development. Evaluations of CI Wechsler Intelligence Scale for Children (WISC-IV) were administered to 5 NTBC treated children and one liver transplanted. IQ values ranged from mild-borderline and 3 patients without formal evaluation exhibited learning difficulties. We correlated with phenylalanine/tyrosine concentrations. CONCLUSIONS: Treatment with nitisinone has improved survival rate of HT1. Treatment with nitisinone after two months of life is associated with cirrhosis and/or HCC. Three patients who received nitisinone before two months of life have not complications yet. At long-term follow-up, most patients showed cognitive impairment. This highlights the importance of regular cognitive assessments at school entry and at later intervals. Prospective studies are required to characterize neurocognitive outcomes.