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HEPATOBLASTOMA: A CASE REPORT

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Abstract: Hepatoblastoma is popularly known as a cancer of the liver. It is one of the most common liver neoplasms in children and its presentation before the age of 5 is considerably rare, more prevalent among those under the age of 3. Most of the time it is asymptomatic and the most common clinical finding is an increase in abdominal volume, since due to the age range of the disease, the presence of other symptomatic complaints is not easy to identify. Elevated levels of α-fetoprotein (AFP) are indications for the diagnosis of this pathology, acting as a biomarker for hepatoblastoma, but it is not considered exclusive of this neoplasm. Thus, this study aims to report a case of hepatoblastoma in a 3-month-old female infant and its evolution in clinical practice until the moment in which surgical intervention was indicated.
Keywords: Hepatoblastoma, biomarker, liver, AFP, infant.

INTRODUCTION

Hepatoblastoma is one of the most common types of liver cancer in children, representing about 1.1% of all cases, being rare after 5 years of age and with a higher prevalence in male children. (KEHM et al., 2018).

They are usually asymptomatic in children and present with an increase in abdominal volume, without other associated symptoms. (LIM et al., 2019). The diagnosis occurs around 3 years of age, with an increase in abdominal volume and a palpable mass, which can be confirmed by imaging tests, preferably color Doppler ultrasonography or tomography. Increased levels of α-fetoprotein (AFP) is the only biomarker for hepatoblastoma, however, it is not exclusive to this neoplasm. (SUMAZIN et al., 2017).

Seven histological subtypes have been identified and are commonly associated with highly heterogeneous somatic mutations in the β1-catenin gene (CTNNB1), which encode β-catenin, a co-transcriptional responsive to WNT binding factor. The Wnt/B-catenin pathway plays a key role in proliferation and differentiation, stem cell renewal, epithelial-mesenchymal transition and cell adhesion. About 15% have mutations in the activator gene (beta-1 catenin gene) that encodes b-catenin. CTNNB1 is the most frequently activated oncogene in hepatocellular carcinoma (30%). (ZHANG et al., 2019).

Hepatoblastoma is histologically classified into two types: epithelial and mixed, according to their degree of differentiation, with embryonic or fetal cells. Both types of cells can be found, depending on the case. Tumor embryonic cells are less differentiated, while fetal cells are better differentiated. (AGUIAR, 2019).

We report a case of a child diagnosed with hepatoblastoma in the neonatal period, with no satisfactory response to chemotherapy, in discussion of liver transplantation.

CASE REPORT

A 3-month-old female patient who came to the consultation because of abdominal distension shortly after birth. This distension was not diagnosed by the ultrasounds performed during prenatal care. The pregnancy was uneventful, except for the diagnosis of gestational hyperthyroidism.

Because he had significant abdominal distention in the first month of life, he was investigated with ultrasound, which detected a heterogeneous liver mass. The patient was transferred to the secondary hospital, where an MRI followed by a biopsy was performed. Histopathological examination diagnosed stage 2 hepatoblastoma, with the tumor measuring 10x9cm in size and 6 cm in depth. MRI confirmed a liver mass.

Given this diagnosis, chemotherapy was started 19 days after extrauterine life, with 24 hours of direct chemotherapy with a portal

catheter. The patient had a good evolution, without nausea, vomiting or diarrhea. She received natural breastfeeding with no further complications.

Seven days after the first chemotherapy, the patient had a persistent fever of 38.6°C, with a blood count suggestive of infection, attributed to the central venous access. Antibiotic therapy was prescribed for seven days, and the second chemotherapy session was postponed.

The second chemotherapy session occurred with 43 days of extrauterine life, 3 weeks and 3 days after the first session, evolving with intercurrence of vomiting in consecutive jets. Hyperkalemia was diagnosed and the patient was discharged after correction.

The third chemotherapy session was postponed due to complications related to the loss of central venous access.

Fifty-two days after the start of chemotherapy, and 30 days after the second session, a relevant reduction in the tumor mass was observed on physical examination, estimated at 40%, but not confirmed by magnetic resonance imaging for the precise determination of tumor regression.

After four chemotherapy sessions, a still voluminous tumor mass was detected on ultrasound, and liver transplantation was indicated after the sixth session.

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