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HEPATOBLASTOMA IN AN 11 YEARS OLD MALE ADOLESCENT

Pathology

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ABSTRACT

Hepatoblastoma is the most common tumour in children under the age of 5 years. Diagnosis is made usually by combination of clinical, laboratory and radiological findings. Biopsy is the gold standard for diagnosis. We present a case of hepatoblastoma of an 11 years old boy which is unusual in his age.

KEYWORDS

Hepatoblastoma, Malignant liver tumours in child, Primary liver tumours, Alfa fetoprotein.

INTRODUCTION:

Hepatoblastoma is rare malignant tumour of liver seen highest in children[1]. It arises from precursors of hepatocytes and occurs predominantly in children less than 5 years old[2] .There is more incidence in boys than girls. Usually patient presents with abdominal enlargement, mass or pain. Anorexia and weight loss may be reported. In adults Hepatoblastoma is very rare, approximately 70 cases reported till 2016[3].

CASE REPORT:

An 11 years old male child born out of non-consanguineous marriage present with history of loss of appetite for the past 3 months, loss of weight for last 1 month, progressive swelling of abdomen for 2weeks, fever and yellowish discoloration of urine for 1 week.

EXAMINATION REVEALS-

On admission patient was febrile, normotensive BP -100/60(>50th-<90th percentile)}, PR-110/min, RR-22/min, no lymphadenopathy, mild jaundice, moderate ascites, huge nontender hepatomegaly.

INVESTIGATIONS

CBC- Hb-11 gm%, RBC-3.6 million/cumm,TLC- 16000/ cumm, N80%, L17%, Platelate-5 L/cumm
KFT –Within Normal Limits
Routine urinalysis- Within Normal Limits.
LFT- Total bilirubin- 1.6 mg/dl ,conjugated bilirubin- 0.6 mg/dl
ALP- 164 IU/L, SGPT-39 IU/L, SGOT-323 IU/L
PT/INR,APTT- Within Normal Limits
Hepatitis B and C and HIV tests were negative
CRP- 89.48 mg/l
AFP- >202000 ng/ml

CECT OF ABDOMEN- echogenic solid mass in liver (118 x 111 x 169 mm).

Clinical features associated with high AFP and CECT finding are highly suggestive of a primary malignant liver tumour, we go for a CT guided liver biopsy.

LIVER BIOPSY:

Microscopic findings- Sections from liver showed cells arranged in solid sheets and trabecular pattern. The cells had distinct cell membrane and uniform nuclei with minimal pleomorphism and there was presence of fetal pattern and foci showing rossete formation which confirmed diagnosis of hepatoblastoma(pure epithelial).

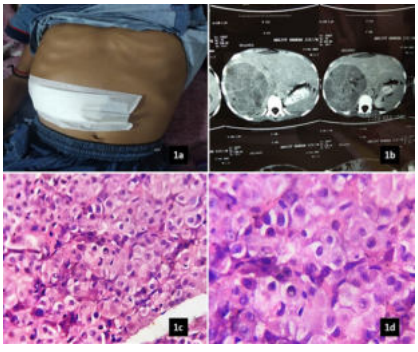

Fig 1 (a) Clinical picture showing right sided abdominal swelling (b) CECT abdomen shows echogenic solid mass in liver (c) Low magnification showing cells with uniform nuclei and minimal pleomorphism arranged in short cords of 2-3 cell thickness (100x,H&E) (d) High magnification view of the same (400x,H&E)

TREATMENT: Chemotherapy was started at our Hospital but patient died after 1 month of initiation of treatment.

DISCUSSION:

Hepatobastoma accounts for 1% of pediatric cancers[4] . Most tumors develop in children younger than 5 years old.[5]A study by Pateva *et al*. in 2017, over a period of 16 years, showed that only 13 cases were more than 5 years of age[1] .Buckley et al[6] suggested that hepatoblastoma was not associated with hepatitis infection .few known risk factors like maternal antenatal exposure to heavy metals identified[6] .Others like Beckwith–Wiedemann syndrome, familial history of adenomatous polyposis(FAP), and low birth weight are also associated[1,4,7] .In a single case of hepatoblastoma reported with fetal alcohol syndrome. Preeclampsia, oligohydramnios, polyhydramnios,women receiving infertility treatment and high maternal pre-pregnancy weight are other factors associated with hepatoblastoma[1].

CONCLUSION:

Hepatoblastoma is uncommon at the age of 11 years. So when a child presents with abdominal lump,decreased appetite, weight loss and hepatic mass by imaging studies, high levels of serum AFP and thrombocytosis, should always raise suspicion of hepatoblastoma. All other conditions should be ruled out by clinical examination, bio-chemical tests and histological studies. So early recognition of the tumour may lead to early and prompt intervention and speedy recovery. Liver biopsy remains the GOLD STANDARD diagnostic tool for confirming HEPATOBLASTOMA

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