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Case Report

Rare case of coexisting hepatic, splenic, and vertebral hemangiomas – A case report ☆

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ABSTRACT

Synchronous existence of hepatic, splenic, and skeletal hemangiomas has not been reported previously in the English literature to our knowledge. In this case report, we present a case of coexistence of hepatic, splenic, and skeletal hemangiomas in a 30-year-old woman with on and off bilateral lumbar region pain and no significant past medical history. Radiological investigations, including ultrasound and computed tomography and magnetic resonance imaging helped identify the synchronous existence of hepatic, splenic, and skeletal hemangiomas. The patient improved with conservative management and was kept on follow-ups. Although there have been reports of coexistence of splenic and hepatic hemangiomas in the literature, to our knowledge, this is the first report of synchronous existence of hepatic, splenic, and skeletal hemangiomas.

Introduction

Hemangiomas are benign lesions that are characterized by proliferation of blood vessels. They are usually indolent unless they attain a large size. Although, hemangiomas are common pathology in various organs, coexisting hemangiomas in multiple organs is rare and are often related to certain syndromes [1]. Coexisting hepatic, splenic, and skeletal hemangiomas has never been reported previously in the English literature to our knowledge. We present a case with incidental findings of multiple hepatic, splenic, and vertebral hemangiomas in this case report.

Case presentation

A 30-year-old female presented on radiology department for a triple phase CT abdomen for recurrent abdominal pain for last 5 days localized on bilateral lumbar regions.

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Fig. 1 – Ultrasound demonstrates multiple echogenic lesions in either lobe of liver.

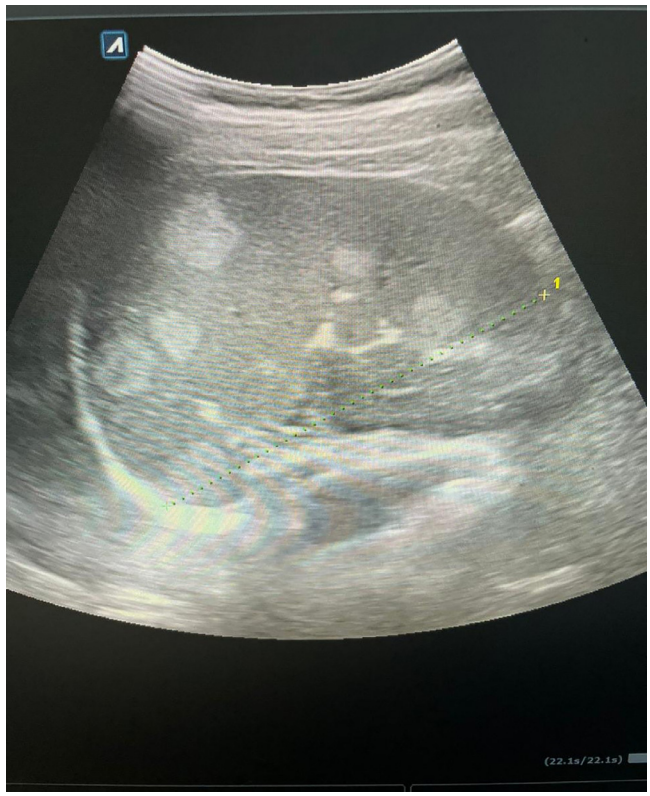

Fig. 2 – Ultrasound demonstrates multiple echogenic lesions in the spleen.

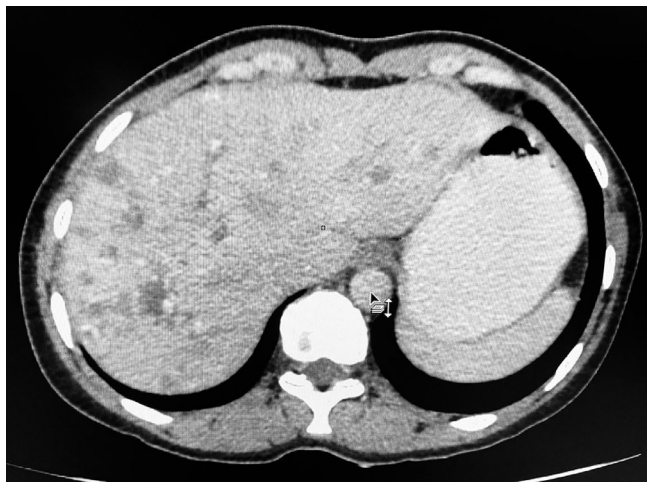

Fig. 3 – Axial CECT demonstrates centripetal filling of hepatic hemangiomas.

She had no history of fever, nausea, or vomiting. She had no significant previous medical history. No known comorbidities were present. On enquiry, she gave a history of medical termination of pregnancy 1 year back but no history of any oral contraceptive usage. Her familial history was not significant too.

Physical examination revealed that the patient was afebrile but ill looking. Other vitals were normal. On per abdominal examination, the abdomen was soft, nontender without any presence of organomegaly. The results of laboratory tests revealed WBC count of 7.5 $\times$ 10^9/L (4.5-11 $\times$ 10^9/L) with neutrophils 61% and lymphocyte 34% in differential count, hemoglobin count was 11.5g/dL (12.5 g/dL to 16.5 g/dL)and platelet count was 23.7 $\times$ 10^9/L (150-400 $\times$ 10^9/L). Her liver function test revealed total bilirubin of 0.8 mg/dL (0.10-1.20 mg/dL), direct bilirubin 0.2 mg/dL (<=0.30 mg/dL), ALT 19 IU/L (5-35 IU/L),AST 27 IU/L (8-40 IU/L), ALP 92 IU/L (30-120 IU/L).Others were urea 23.13 mg/dL (14-40 mg/dL), creatinine 0.59 mg/dL (0.50-1.30 mg/dL), Na^+ 139 mmol/L (135-155 mmol/L), K^+ 4.1 mmol/L (3.5- 5.5 mmol/L). Her random blood sugar was 95 mg/dL (70-140 mg/dL) and had normal urine routine examination. Tumor markers performed as carcinoembryonic antigen, Alpha fetoprotein, B-HCG were all negative.

An abdominal and pelvic ultrasound was performed which demonstrated multiple diffuse well defined hyperechoic lesions in bilateral lobes of liver and spleen suggesting hemangiomas (Figs. 1 and 2). Abdominal CT demonstrated multiple well defined, rounded isodense lesions of similar sizes measuring approximately 13 x 12 mm diffusely distributed in bilateral lobes of liver. Postcontrast study shows peripheral nodular enhancement on arterial phase with progressive centripetal fill in contrast in delayed images (Fig. 3). Multiple similar lesions were noted in spleen also largest measuring 3.5 x 2.5 cm (Fig. 4). The CT also demonstrated thickened vertical trabeculations of D9, D10, and D11 vertebral bodies which give polka –dot appearance on axial images and cor-

Fig. 4 – Axial CECT demonstrates centripetal filling of splenic hemangiomas.

Fig. 5 – Axial CT of lumbar spine demonstrates polka dotted appearance of vertebrae.

duroy appearance on coronal and sagittal images s/o hemangiomas which were hyperintense of T2WI (Figs. 5 and 6). Well-corticated lytic lesions were also noted in visualized vertebrae, bilateral pelvis, and femoral bones. The patient was treated conservatively and on follow-up symptom had subsided.

Discussion

Coexisting hepatic, splenic, and vertebral hemangiomas is a rare occurrence that poses a complex medical scenario. Hemangiomas are benign vascular tumors that can occur in various parts of the body, including the liver, spleen, and bones. Hepatic and splenic hemangiomas are common benign tumors, with the liver and spleen being the most frequently affected organs. They are however often discovered incidentally and may not cause any symptoms [1]. At times, giant hemangiomas in the liver can cause pressure effect on the adjacent organs and even bleed [2]. Skeletal hemangiomas are benign vascular lesions that typically affect 1 or 2 vertebrae and are usually asymptomatic [1]. The blood count, LFT, AFP, and CEA are usually normal in hepatic and splenic hemangioma except in Kasabach-Merritt syndrome characterized by consumptive coagulopathy (decreased platelet count).

Fig. 6 – T2W MRI demonstrates hyperintensity of the body of the involved vertebrae.

Although isolated hepatic, splenic, and vertebral hemangiomas are commonly encountered, the coexistence of hepatic and splenic hemangiomas is a rare occurrence. A case report described a patient with a giant splenic hemangioma and multiple hepatic hemangiomas. The patient had a history of long-term oral estrogen intake, which may have been a contributing factor to the development of the hemangiomas. The optimal approach for managing the synchronous presence of liver and spleen hemangiomas was considered to be a combination of hepatic artery embolization and splenectomy [3].

Another rare case report discussed the coexistence of a giant splenic hemangioma with vascular malformations of the vertebrae. The patient presented with back pain and weakness of the lower back and legs. The treatment for the symptomatic vertebral hemangioma was a matter of debate, highlighting the complexity of managing the coexistence of these rare conditions [4].

Although coexisting hepatic, splenic, and vertebral hemangiomas have been reported, a coexisting hepatic, splenic, and vertebral hemangiomas is extremely rare. Furthermore, our case is unique because no any contributing and risk factors were associated.

Conclusion

Although hemangiomas can occur in isolation in various organs, it is essential to rule out possibility of synchronous existence in other organs which may alter the overall management or suggest a spectrum of syndromes.

Patient consent

We hereby confirm that we have obtained written, informed consent from the patient featured in this case report/study for the publication of their personal and medical information and have been fully informed of the potential risks and benefits associated with the publication of their case, including the possibility of identification and any potential impact on their privacy and well-being.

By signing below, patient privacy and confidentiality, and that the patient's rights have been guaranteed.

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