surrounding vessels or tissues. Pylorus- preserving pancreaticoduodenectomy was done, and the post-operative course was uneventful. The patient was discharged on the 8th post-operative day. Histopathological examination revealed a 1.5x 1.0 cm greyish white tumor in the pancreatic head, which was blocking the main pancreatic duct. Sectioning showed a highly cellular tumour, with spindle, polygonal and oval cells, arranged in an interlacing pattern, and revealed that the tumour was arising from the main pancreatic duct wall. Immunostaining was positive for SMA and vimentin, and negative for CD 117, CK, CD 34, and myogenin **(Figure 5)**. The duodenum, the rest of the intestine, and the resected margins were normal and free of tumour. Based on these findings, a final diagnosis of leiomyosarcoma of the pancreas arisng from the main pancreatic duct was established.

The patient has been under regular follow up for the last 2 years, and is free of all the previous symptoms.

Discussion

About 5%–7% patients with pancreaticobiliary tumors may present with acute pancreatitis. Common tumors presenting as acute pancreatitis include ampullary tumors and cystic neoplasms of the pancreas, especially the intra-ductal papillary mucinous tumour (IPMT).[1]

This is the first case report of leiomyosarcoma of the pancreas presenting as recurrent attacks of pancreatitis. Leiomyosarcoma in itself is a rare pancreatic tumor, but is the most common stromal tumor of the pancreas.[2] The clinical presentation of leiomyosarcoma is variable. The tumour usually presents in the fifth decade of life and males are affected more often than females . Abdominal pain and weight loss are the most commonly reported symptoms. The median size is more than 10 cm, and it can reach upto 25 cm. Large tumours can develop cystic degeneration and can mimic pseudocysts of the pancreas.[3] Leiomyosarcomas of the pancreas may invade adjacent structures and cause widespread metastasis to the liver and lung; however, lymphatic involvement is rare. Abdominal CT scan may reveal solid, cystic and heterogeneous lesions distributed along the pancreatic head, body and tail.

A definitive diagnosis may be established by histology, which is required to confirm its myogenic origin, and differentiate it from neurogenic and stromal tumors. The tumour cells are positive for desmin and smooth muscle actin, and negative for S-100 protein and CD117. Surgery is the curative treatment and the type of surgery depends on the site of the tumour. Pancreatic head tumors are treated by Whipple's procedure, while tail tumors require distal pancreatectomy.

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Post-traumatic hepatic pseudoaneurysm: is intervention a must in all cases?

Introduction

Though there are clear-cut guidelines for the management

of blunt trauma to the abdomen in children, the management of post-traumatic pseudo-aneurysm of the liver remains controversial.[1] Some people believe that prophylactic angiographic embolization should be done in all cases of post-traumatic liver pseudo-aneurysm because of risk of catastrophic bleeding while others believe that they can just be observed as spontaneous resolution is known to occur. Here, we report the case of a 7-year old child who had a post-traumatic pseudo-aneurysm of the left hepatic artery that resolved spontaneously.

Case Report

A 7-year-old girl presented with abdominal distension and pain for 5 days following blunt trauma to her abdomen. She was hit by a metal box which fell on her abdomen from a height of around 5 feet. There was no history of hematemesis or melena. The child was hemodynamically stable. Her abdominal examination revealed mild distension with tenderness over the epigastrium. She did not have ascites, any palpable lump or any feature of pneumoperitoneum.

Investigations showed normal complete blood counts (Hb: 11.4 g/dL, TLC: 7,900, Platelets: 1.6 x 10^5/mm^3); liver function tests were within normal limits and so was serum amylase.

CT-scan abdomen (on the day 6 following trauma) showed a heterogeneous lesion in the liver extending up to the surface, measuring 2.8×2.3×2.4cm and involving segment IVa and IVb which was suggestive of a liver laceration. A focal area (13.3×10.3mm) of staining in arterial phase with enhancement in portal and venous phase was seen in the laceration which was suggestive of a pseudo-aneurysm of the left hepatic artery **(Figure 1A)**. Also, there was a hematoma (3.2× 2.9 ×2.8 cm) at the junction of the neck and body of the pancreas **(Figure 2A)**. Other abdominal viscera were normal.

As the child remained hemodynamically stable and there was no further pain, distension or fall in haemoglobin, she was managed conservatively and followed up with weekly Doppler ultrasound to monitor the size of the pseudo-aneurysm. Over the following two weeks, the size of the pseudo-aneurysm remained static and there were no signs of rupture. By the third week, the size reduced with no flow detected in the pseudo-aneurysm and by the fourth week, it resolved completely. A repeat CT-scan was done after 8 weeks in which no pseudo-aneurysm could be seen **(Figure 1B)**. Although there was complete resolution of the liver laceration, a linear hypo-density (much smaller than before) persisted in the neck of the pancreas, which suggested that the haematoma was resolving **(Figure 2B)**. On follow-up over the following 3 months, the child remained asymptomatic.

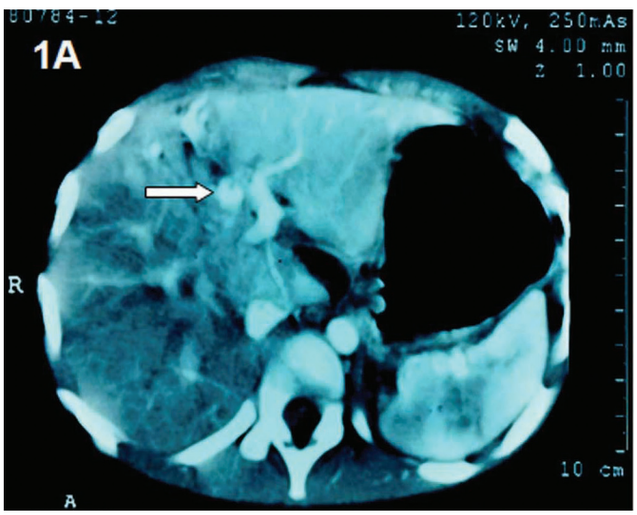

Figure 1a: CT scan showing pseudoaneurysm (arrow) of the left hepatic artery in the lacerated area of segment IV.

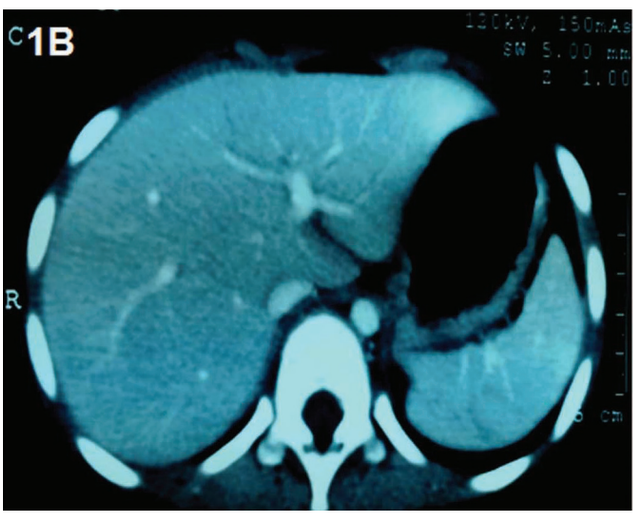

Figure 1b: Repeat CT scan after 8 weeks showed completely healed laceration of segment IV with disappearance of the pseudo-aneurysm.

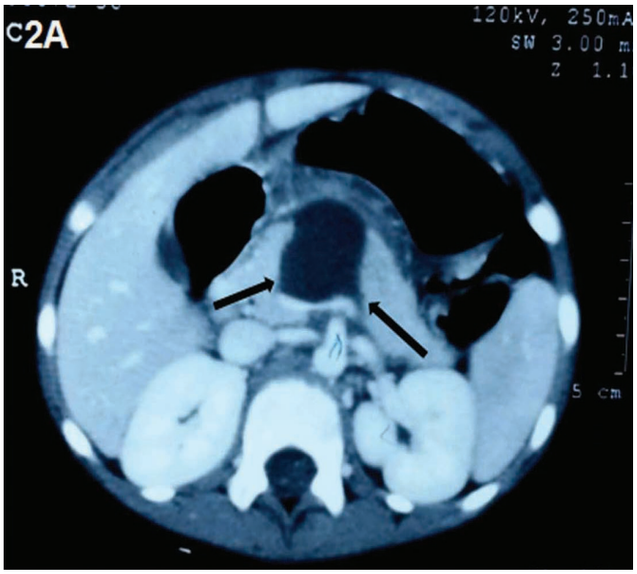

Figure 2a: CT scan showing a large hematoma (arrow) in the neck and body area of pancreas.

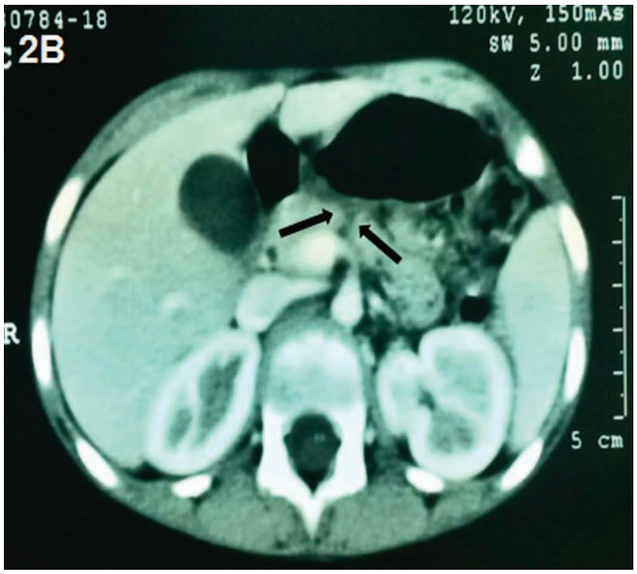

Figure 2b: Repeat CT scan after 8 weeks showing a linear hypodensity (arrow) (much smaller than before) in the neck of the pancreas suggestive of resolving hematoma.

Discussion

Post-traumatic pseudo-aneurysm of the liver is an uncommon but potentially dangerous sequel of blunt trauma abdomen. In a recent series of 176 cases of abdominal trauma in children, 3 had developed pseudo-aneurysm (1.7%) and all of them were associated with grade IV liver injuries (3 of 11 or 27% of grade IV injuries).[2] Two had life-threatening hemorrhage which was controlled by angiographic embolization in one and by laparotomy in the other while the asymptomatic patient underwent prophylactic angiographic embolization. There is a report of hemorrhagic shock in a 14-year old child with post-traumatic hepatic pseudo-aneurysm rupture which was successfully managed by embolization.[3] Sidhu et al reported three children with post-traumatic hepatic pseudoaneurysms.[4] Though only one child had bleeding into the gastrointestinal tract, all three underwent angiographic embolization. In a recent case report, Yi et al did a prophylactic embolization of a post-traumatic hepatic artery pseudo-aneurysm in a 10-year-old-child.[5]

There is no consensus on the issue of managing post-traumatic pseudo-aneurysm of the liver detected on routine follow-up imaging as the natural history of these lesions has not yet been defined. Many people prefer to manage these cases with prophylactic angiographic embolization as the technique and success of angiographic embolization are quite satisfactory and there is a risk of catastrophic bleeding following rupture of the pseudo-aneurysm. However, this approach is more often a panic-driven reaction than one based on firm evidence.

Spontaneous resolution of post-traumatic pseudo-aneurysm of the hepatic artery is possible and usually happens early in the course. In a report of a 4-year-old girl, who sustained blunt trauma to the abdomen and was detected to have 3 pseudo-aneurysms of the liver on day 7, angiographic catheter embolization was not done due to nonmedical issues, and she was followed up radiologically. Partial thrombosis of the pseudo aneurysm was documented in the second week and complete resolution by 6 weeks.[6] Similarly, in a study of 186 children with traumatic splenic injury, 7 of 10 splenic artery pseudo-aneurysms thrombosed spontaneously within 12 days of the injury.[2] In our case also, partial thrombosis of the pseudo-aneurysm was documented in the third week and complete resolution occurred by 4 weeks. Hence, an incidentally detected

hepatic artery pseudo-aneurysm following trauma can be safely observed for 2 to 4 weeks and if there are no signs of thrombosis after 4 weeks, prophylactic embolisation may be considered.

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Idiopathic Spontaneous Intra-peritoneal Haemorrhage - a rare initial presentation of Haemophilia B

Introduction

We describe a case of idiopathic spontaneous intra-peritoneal haemorrhage (ISIH) as the initial presentation in a patient with Haemophilia B for highlighting the associated challenges in pre-operative evaluation and management of ISIH.

Case Report

A 39 year old male presented to our Emergency Department with a one-day history of acute abdominal pain and vomiting. Abdominal examination revealed generalised tenderness with guarding. An emergency laparotomy was performed on a clinical diagnosis of peritonitis and a three-litre haemoperitoneum was drained but no source of bleeding was evident. Baseline coagulation work up revealed a mildly deranged aPTT of 35.6 seconds (Normal: 25-34.8s). A CT angiogram done on the fourth post-operative day was normal. Post-operative recovery was uneventful and he was discharged on the eighth post-operative day.He presented once again to the Emergency department with a similar history on the sixteenth post-operative day. His PCV was 17% and his aPTT was 50.4 seconds; corrected to 30.4s with ½ patient and ½ control serum. CT angiogram revealed a haemoperitoneum with a large haematoma along the hepatico-duodenal ligament. A digital subtraction angiogram (DSA) showed no evidence of bleeding. Exploratory repeat laparotomy for the 1.3 litre haemoperitoneum once again did not reveal the source of the bleed. The post-operative period was uneventful. A haematology workup two weeks after operation revealed low factor IX levels (14.7%) suggestive of mild Haemophilia B.

Discussion

ISIH is an uncommon surgical emergency (previously known as abdominal apoplexy) with the commonest cause being trauma. Although it was first described by Barber