A rare case of hepatic myxoma: Case Report

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ABSTRACT

Myxomas are benign tumours occurring commonly, but not limited to the heart. Myxomas can also occur in various locations such as the skeletal muscles, skin, urogenital tract, subcutaneous tissue and even in bone. They are quite rare; are tumours of mesenchymal origin and usually produce mucinous type fluid. About 1 in 10 are hereditary and tend to occur more commonly in women. Common benign hepatic masses are of epithelial origin and majority are discovered incidentally on radiological abdominal or chest screening.

We present a case of an intrahepatic myxoma. Clinical and radiological features in keeping with a simple hepatic cyst. The elective surgical intervention planned was that of an open cystectomy. Progression of the case led to emergency laparotomy after trauma to the patient’s abdomen and the patient presenting with an acute abdomen and clinical features of cyst rupture. Aspiration of the seemingly mixed solid-cystic mass revealed a very thick non purulent turbid fluid which was sent together with the excised mass for cytology and histopathology. Histology reported features of an intrahepatic myxoma.

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1. Introduction

Liver masses present in about 6% of the patients undergoing screening CT of the chest or abdomen and of those numbers about 5–10% are benign cystic liver masses. Modern day preventative medicine and routine use of numerous radiological modalities such as the CT scan and MRI have led to a large number of asymptomatic incidental liver masses being diagnosed. Literature notes the lifetime risk of roughly 30–40 per million cases of women with hepatocellular adenomas in childbearing years will be secondary to use of oral oestrogen-based contraceptive agents. With masses over 5 cm in diameter being recommended for excision due to the risk of progression to hepatocellular carcinoma. The prevalence of incidental Focal Nodular Hyperplasia in women undergoing abdominal screening via ultrasonography and CT was respectively 0.2% and 1.6%.

In patients were symptoms were reported, the commonest finding was that of right upper quadrant pain - with or without cirrhosis or jaundice. A significant portion of the larger hepatic masses also presenting with intraabdominal haemorrhage. Findings such as preceding Hepatitis B or C infection, weight loss, liver cirrhosis with or without evidence of liver failure were linked with malignant hepatic masses. Our case provided a unique opportunity where the patient presentation, the age and radiological findings were that of a solitary benign hepatic cystic mass. Diagnoses in keeping with a simple cystic mass were kept top of the surgical team’s management plan, however, intraoperative findings led us to further broaden the diagnoses to incorporate solid benign hepatic masses. Specimen histopathology revealed the mass to be a intrahepatic myxoma, an uncommon occurrence in the liver.

2. Case presentation

A 29-year-old female patient presented to the gynaecology outpatient department at 6 weeks gestation with a non-tender, intraabdominal mass which has been present for approximately 2 years. On history she reported over the month prior to presentation the mass progressively enlarging. Initial sonographic evaluation by the gynaecology team revealed an intrauterine pregnancy with an associated intraabdominal mass appearing cystic in nature. MRI subsequently done reported: a thin-walled right upper quadrant intraperitoneal unilocular cystic lesion, measuring 17 cm × 16 cm × 12 cm (Fig. 1). Its benign features described as no septations, no floating membranes, no soft tissue component, no fat-fluid level and no daughter cysts. It was assessed as being separable from the IVC, aorta, liver, right kidney and right psoas muscle. It was, however, near the ascending and transverse colon and abutting the abdominal wall. The patient was then referred by the gynaecologists to our general surgery unit for surgical intervention. The surgical team consisting of Dr Phakula (as the lead surgeon) and Dr Lekalakala (registrar) were consulted on the case, the team deals primarily with acute care gastrointestinal pathology with a special interest in minimal assess surgery. The patient

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was seen in our outpatient clinic, on questioning had no significant medical or surgical history. She was unsure of any prior family history with tumours or cancers and had spent most of her life living in an urban environment with adequate ablution facilities. On examination the patient showed no signs of jaundice or palor and a large right upper quadrant mass inseparable from the liver was palpated. The mass was circular, smooth, non-tender and measuring roughly 10 by 12 cm. The rest of the abdomen measured within normal limits. Laboratory investigations showed a negative hepatitis screen, negative HIV test, normal liver function test and echinococcus screen pending. She was counselled and consented by the surgical team for an elective open cystectomy during pregnancy.

However, prior to the planned date of surgery, she represented to gynaecology with severe acute abdominal pain following trauma to the abdomen. On examination she was hemodynamically stable, her vitals within normal limits and with a tender abdomen mainly on the right upper quadrant. Her laboratory results were unremarkable with a normal haemoglobin and normal liver function tests. The patient’s major concern at this stage was for the safety of her unborn foetus, for which, a gestational sonar was done by the gynaecology team with findings in keeping with a live intrauterine pregnancy. She was taken for emergency laparotomy by the same surgical team and intra-operatively a large benign-looking tumour of the liver was found, with evidence of rupture but bleeding had at the time ceased spontaneously. The tumour was adherent to the gallbladder on its posterior aspect. The surgical team proceeded with tumour excision and cholecystectomy for the patient (Fig. 2). The surgical team anticipated bile duct injury as a result of the difficult tumour excision and resultant cholecystectomy. Intra-op-eratively no obvious biliary leaks were observed, the common bile duct remained patent and intact. The team opted to leave a closed intraabdominal drain.

Post operatively the patient remained haemodynamically stable, she was transferred to the general gynaecology ward and had subsequently developed a bile leak which the team elected to manage conservatively. The bile resolved spontaneously in under seven days (Clavien-Dindo Classification Grade 1). The patient went on to deliver a healthy baby at term. Histology of the specimen revealed an intrahepatic myxoma and a gallbladder showing chronic cholecystitis. Reporting on the clinical parameters of the case were done in line with the SCARE 2018 criteria [1].

Our list of differential diagnoses included causes of benign liver masses; such as simple liver cyst, polycystic liver disease, Caroli’s disease, choledochal cyst, hydatid cyst, amoebiasis, single benign solid masses (haemangioma, focal nodular proliferation, hepatocellular adenoma) and malignant solid masses (hepatocellular carcinoma, liver metastasis).

### 3. Discussion

Our discussion is centred around solid benign masses of the liver. Benign proliferation of hepatic cells such as hepatocyte, endothelial, biliary and mesenchymal cells is quite frequent. Of these frequent occurrences the most common benign tumour types include solitary lesions such as focal nodular hyperplasia and hepatocellular adenomas; or numerous lesions such as haemangiomas, nodular regenerative hyperplasia and hepatic cysts. Herein we will discuss a few of these benign hepatic tumours. Haemangiomas are the most common of these benign hepatic tumours; they originate
from congenital proliferations of endothelial cells and are similar in histology to haemangiomas in the rest of the human body. Complications thereof include but are not limited to spontaneous or traumatic rupture. Haemangiomas (much like hepatocellular adenomas) are common to women of childbearing age and have been shown to be responsive to oestrogen as seen in women who are on oral contraceptive agents and/or during pregnancy. This was extrapolated as a hypothesis by the team to explain the change in size to the tumour on our patient. Hepatocellular adenomas on the other hand, tend to have a rapid growth rate and therefore are associated with spontaneous rupture and likelihood to become malignant (Hepatocellular Carcinoma). Benign hepatic neoplasms may present as abdominal pain or as an intraabdominal mass but many of them are found incidentally during investigations for other symptoms. The preferred radiological investigation for these tumours is a CT scan. In our case, due to the risk of radiation exposure, an MRI was the preferred choice of radiological investigation. Preoperative diagnosis in the form of a biopsy was not recommended owing to fear of haemorrhage and the potential risk of spread in the case of malignancy. Also, preoperative biopsies did not change the management of liver masses in most of the cases. Generally, treatment for benign hepatic neoplasms is guided by the size of the tumour as well as the presence of symptoms. If the tumour is small and asymptomatic, there's room for serial follow up with imaging and regular examinations. In certain instances, however, patients should be offered surgery even in the absence of symptoms. These are in tumours with a high risk of a malignant transformation or when it is not possible to rule out malignancy. Our patient was offered surgery based on the size of the mass, the presence of symptoms, and the potential risk to the pregnancy. Myxomas are benign tumours which are commonly found in the heart. As mentioned prior they have been described in other parts of the body, however, our search has not yielded any reported case of a myxoma in the liver. This may represent a previously unreported pathology in the human body. Most myxomas appear as a single, painless lesion. On ultrasound it appears as a well-defined, hypoechogenic lesion whereas on CT presenting as a well demarcated, homogenous, low-density lesion. On MRI, T1 weighted images appear as low signal intensity versus high signal intensity on T2 weighted series. Fine needle aspiration diagnosis proves to be difficult due to a large amount of mucoid fluid and associated poor cellularity. The recommended management of myxomas is complete surgical excision. Recurrence after complete excision of the myxoma is rare. This was done for our patient and as such no further management was deemed necessary for the patient other than general obstetric care.

4. Conclusion

This case presentation represents a rare case of a benign liver pathology in the form of a myxoma. Even though it is a rare pathology, we recommend it should be considered as a differential in patients who present with benign hepatic tumours. More literature is needed to fully understand the prevalence and incidence of this pathology in the liver.

Declaration of Competing Interest

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Consent

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Author contribution

Author 1 and 2: case report concept and design, data collection, surgical intervention, writing the paper, patient consent and literature review.

Author 3: contributor and reviewer.

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N/A.

Guarantor

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