Case report: Leiomyoma of the anterior abdominal wall

Ernest Ong Cun Wang, MRCS, Siow Sze Li, MBBS, MS

Sarawak General Hospital, Department of General Surgery, Lorong Tun Ahmad Zaidi Adruce, 93350 Kuching, Sarawak

SUMMARY

Leiomyomas are benign soft tissue swellings of smooth muscle origin, most commonly found in the uterus. Extra uterine leiomyomas presenting as an abdominal mass is often a diagnostic challenge as such occurrence is rare. We present a rare case of primary abdominal wall leiomyoma, and highlight the importance of laparoscopic approach in the diagnosis and treatment of such tumour.

KEY WORDS:
Leiomyoma; laparoscopic surgery; anterior abdominal wall

CASE REPORT

A 72-year-old Bidayuh gentleman with no known medical illness presented with lower abdominal pain for one year, associated with constipation, loss of weight and appetite for the past two months. Clinical examination revealed a firm, tender and mobile mass at the left iliac fossa measuring about 5cm x 5cm, and located deep to the anterior abdominal wall. Digital rectal examination revealed no palpable mass. There were no palpable cervical or axillary lymph nodes. Serum carcinoembryonic antigen was within normal range. Initial investigations for tuberculosis (sputum acid-fast bacilli, Mantoux test, erythrocyte sedimentation rate and chest radiograph) were negative. Colonoscopy revealed no bowel mass, but presence of an extra luminal compression on the sigmoid colon. Computed tomography (CT) scan of the abdomen and pelvis (Figure 1) revealed a well-defined calcified mass at the left iliac fossa region measuring 37mm x 47mm x 45mm, reported as a calcified mesenteric lymph node.

With the clinical suspicion of malignancy, the patient was scheduled for a diagnostic laparoscopy which revealed a tumour arising from the anterior abdominal wall that did not infiltrate any parts of the small or large bowels.

Gross examination showed a whitish, smooth tumour, with a whorled cut surface (Figure 2a). Histology revealed a well circumscribed tumour with proliferating smooth muscle cells arranged in interlacing bundles (Figure 2b). Some of the cells show mild pleomorphism and hyperchromatic nuclei. The smooth muscle cells were positive for smooth muscle actin, and negative for CD117 and CD34. Based on these findings, a pathological diagnosis of leiomyomas was established.

DISCUSSION

Leiomyomas are benign smooth muscle neoplasms that most commonly occur in the uterus. Extra uterine leiomyomas are reported to occur in almost any anatomic sites. However, its occurrence in the abdominal wall remains a rare entity.

The exact aetiology for the development of a leiomyoma in an area that primarily consist of skeletal muscle tissue is unknown. Several theories have been postulated to explain the occurrence of leiomyomas in the abdominal wall. In general, abdominal wall leiomyomas can be classified into primary or parasitic. Theories such as transformation from the smooth muscle cells of the blood vessels, or secondary metaplastic changes of non-muscular cells have been postulated for the development of primary leiomyoma.[1,2] In contrast, the concept of parasitic leiomyomas is best explained as a series of events when the uterine leiomyoma becomes adherent to the anterior abdominal wall, develops its own blood supply, and subsequently detached from the uterus to become a parasite at the new location.[3] The above patient is a case of primary abdominal wall leiomyoma with an unclear origin as he has neither previous history of abdominal surgery nor any evidence of bowel related mass.

In the assessment of a large peritoneal mass, standard radiological imaging such as CT and ultrasonography of the abdomen may not be always possible to determine the site of origin to differentiate between tumors.[4] The difficulty in imaging diagnosis has been highlighted here as the mass was initially reported as calcified mesenteric lymph node. Laparoscopy is a good diagnostic tool to determine the origin of the abdominal mass and to facilitate resection or biopsy if indicated.[5] In this case, the site of the tumour is still unclear after abdominal imaging, and was only confirmed during laparoscopy.

A complete surgical resection is the treatment of choice for abdominal wall leiomyomas with recurrence rare after successful surgery.

CONCLUSION

Primary anterior abdominal wall leiomyoma is a diagnostic challenge as it mimics malignant tumour. Laparoscopic approach facilitates the diagnosis and treatment of intraabdominal mass of unclear origin and should be advocated when the expertise is available.

This article was accepted: 26 February 2016
Corresponding Author: Ernest Ong Cun Wang, Registrar, Sarawak General Hospital, Department of General Surgery, Lorong Tun Ahmad Zaidi Adruce, 93350 Kuching, Sarawak
Email: drernestong@yahoo.com or drernestong@gmail.com

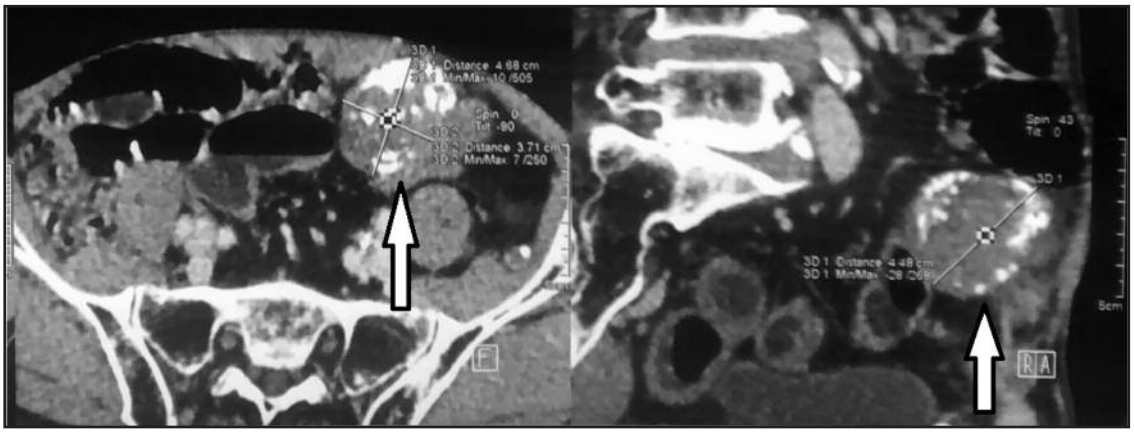

Fig. 1: CT scan showing size and location of abdominal wall leiomyoma (white arrow) in sagittal and axial view.

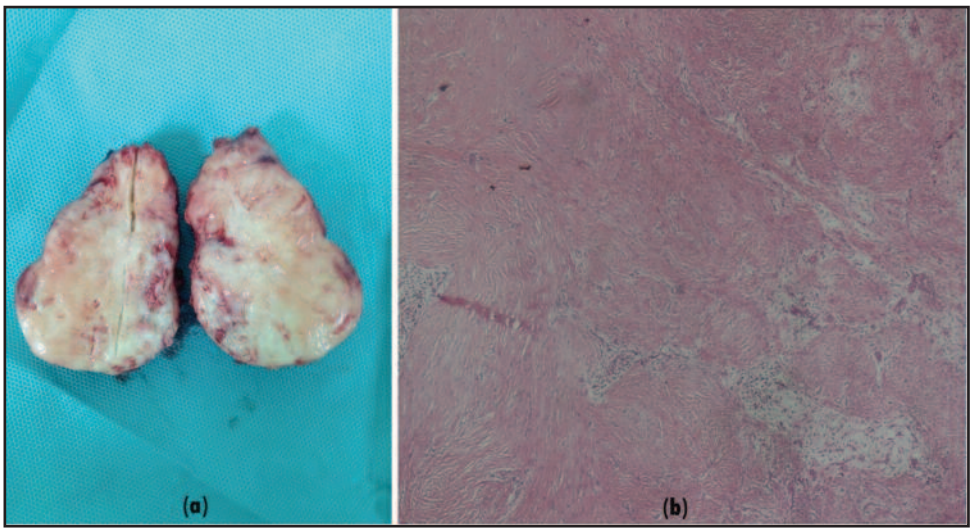

Fig. 2: (a) Intraoperative picture of bisected tumour. (b) Histological specimen of the tumour.

The patient was discharged well on the second postoperative day. At six month follow-up, there were no clinical signs or symptoms of recurrence.

REFERENCES

1. Umranikar S, Umranikar A, Byrne B, Moors A. Intravascular leiomyomatosis: unusual variant of leiomyoma. Gynecol Surg 2009; 6(4): 399-402.
2. Stock H, Perino G, Athanasian E. Leiomyoma of the Foot: Sonographic Features with Pathologic Correlation. HSS Journal 2011; 7(1): 94-8.
3. Sreelatha S, Ashok K, Vedavathy N, Sahana P. A rare case of primary parasitic leiomyoma. International Journal of Reproduction, Contraception, Obstetrics and Gynecology 2013; 2(3): 422-4.
4. Fasih N, Prasad Shanbhogue AK, Macdonald DB, Fraser-Hill MA, Papadatos D, Kielar AZ, et al. Leiomyomas beyond the uterus: unusual locations, rare manifestations. Radiographics 2008; 28(7): 1931-48.
5. Yoon YJ, Ahn SH, Park JY, Chon CY, Kim do Y, Park YN, et al. What is the role of diagnostic laparoscopy in a gastroenterology unit? J Gastroenterol 2007; 42(11): 881-6.