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A RARE CASE OF POST HYSTERECTOMY FIBROID

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Abstract : Giant fibroids are known to arise from the uterus and very rarely from the round ligament and that too after hysterectomy. We report an interesting case of round ligament fibroid in a previously hysterectomised woman. The patient presented with incidental finding of mass and pain in abdomen after 30 years of abdominal hysterectomy for penetrating genital injury. Bimanual examination revealed a firm pelvic mass of 8x8 cm felt through the vault. Ultrasound and CT abdomen were suggestive of possible right ovarian mass because the right ovary was not visualised separately. Laparotomy was done which revealed a mass seen originating from the remnant of the right sided round ligament. Bilateral ovaries were normal. Histopathology of the mass confirmed it to be leiomyoma. We report this case because it is a very rare entity to encounter such a round ligament fibroid occurring many decades after the removal of uterus and because of the diagnostic dilemma it caused.

Keyword : post hysterectomy, round ligament fibroid

INTRODUCTION

Uterine fibroids are the most common benign pelvic tumours in women of reproductive age affecting 20–40% [1] but are found in 75% of hysterectomy specimens [2]. Extra-uterine fibroid however is not as common as uterine fibroids. It may arise in the broad ligament, round ligament or at other sites [3]. Intra-round-ligament fibroid may grow at any point along the track of the ligament, from the uterine horns to the entry opening of the inguinal canal, in the inguinal canal, or after exiting the inguinal canal in the labia majora or mons pubis mimicking therefore other mass lesions in the region such as lymphadenopathy or inguinal hernias [4]. Unlike other leiomyomas, intra-ligamentous tumours can grow in already hysterectomised patients [5]. We are presenting an unusual case of post hysterectomy leiomyoma arising from the round ligament.

CASE REPORT

A 45 years old nulliparous woman presented with complaints of abdominal pain for past 3 months. It was gradual in onset, dull aching in nature and associated with heaviness in lower abdomen. There was no history of bladder and bowel disturbances. There was no history of difficulty in micturition or pain during micturition. There was history of total abdominal hysterectomy performed in a private hospital at the age of 15 years for penetrating genital trauma while playing before attaining menarche. There was no history of sudden weight loss, anorexia or fever. There was no history of malignancy in the first degree relatives. She is a known hypertensive on medications for the past three years. She was married to a widower 22 years back.

On physical examination the woman was obese, haemodynamically stable with normal vital parameters. Respiratory and cardiovascular system had no abnormality. On per abdominal examination a vague mass was felt in the supra pubic and right iliac region which appeared to be arising from the pelvis. No dilated/engorged veins or visible peristalsis could be seen. On palpation the tumour was firm in consistency with ill-defined margins, mobile and non tender. There was no hepatosplenomegaly/significant lymphadenopathy. There was no free fluid in the abdomen and pelvis. On per speculum examination cervix was not seen (consistent with history of hysterectomy) and vault was healthy. No abnormal discharge was seen. On bimanual examination, a mass of 8×8cm felt through the vault, mobile and firm in consistency. On per rectal examination, the same mass was felt. Rectal mucosa was free. All basic investigations were within normal limits. Ultrasonography of the abdomen and pelvis revealed a hypo echoic mass of 7×7cm size. Uterus was not seen, ovaries could not be visualized well. No lymphadenopathy was noted. CT abdomen and pelvis confirmed the findings which showed post hysterectomy status with 8×7×7 cm solid and cystic lesion in the right adnexa without any infiltration into adjacent organs, however it did not supply any additional information about the origin of the tumour.[figure-1&2]. Tumour marker CA-125 was 27 U/mL.

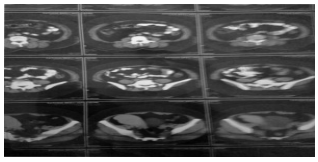

Figure 1

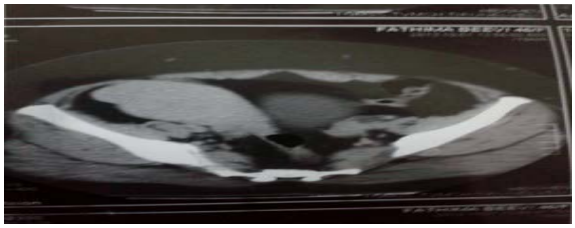

Figure 2

With a diagnostic dilemma in mind and with high suspicion of ovarian malignancy, exploratory laparotomy was planned. Abdomen was opened by midline incision. A fleshy globular mass of size 8×7cm was seen arising from the remnant of the right sided round ligament. The mass had a thick, highly vascular pedicle attached to the right sided round ligament. There was no capsule and the tumour was firm in consistency and smooth [figure-3]. Both ovaries were normal in appearance and placed in the ovarian fossa with part of fallopian tubes attached to them. The bowel was free from any adhesions. The mass was delivered out and clamps were applied carefully at the base of the pedicle. The mass was completely removed and sent for histopathological examination. Bilateral ovaries were also removed and sent for histopathological examination after careful dissection. Pelvic lymph nodes were palpated and no enlargement was found.

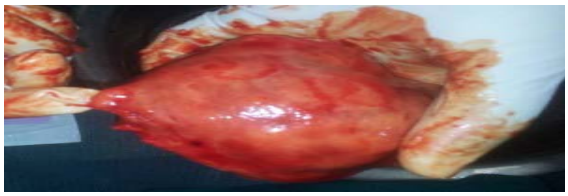

figure 3

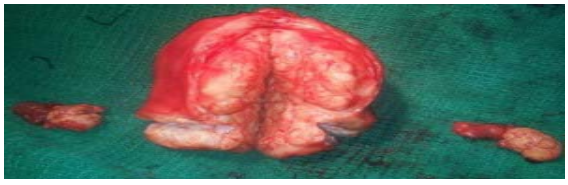

figure 4

On gross examination , there was a specimen of one soft tissue mass measuring 8×7×7 cm. Cut surface showed whorled white mass , greyish white in colour, firm in consistency [figure-4]. On histopathological examination, the section studied showed tumour composed of interlacing fascicles of smooth muscle cells with isomorphic nuclei and scant stroma suggestive of leiomyoma [figure- 5&6]. Both ovaries showed no remarkable changes.

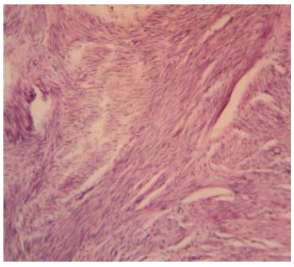

figure 5

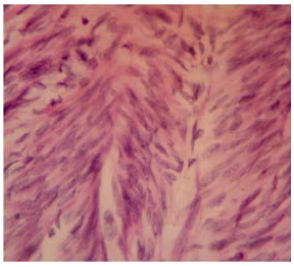

figure 6

DISCUSSION

Tumours of the round ligament of the uterus are quite rare. The most commonly found tumours are leiomyomas, followed by endometriosis and mesothelial cysts[6] . Approximately, one-half to twothirds of leiomyomas occur in the extra-peritoneal portion of the round ligament and are more common on the right side for unknown reason[7]. The transformation of the myofibrous structure of the female genital tract to leiomyoma involves somatic mutations of normal smooth muscle and a complex interaction between sex steroids and local growth factors. Estrogen is the major promoter of the myoma growth; however, the role of progesterone is still unclear [8] as both receptors have been found in the round ligament [9]. The incidence of retention of ovarian cyclicity after hysterectomy remains somewhat unclear.

The majority of post hysterectomy patients under age 48 continue to show an ovarian cycle, according to any of several criteria: bioassay of weekly urine samples, cyclic records of premenstrual tension phenomenon, plasma hormone evaluation, and studies of vaginal smears[10,11,12]. However, the phenomenon appears to be less than universal. Ranny and Abu-Ghazaleh [13] evaluated the future function and control of ovarian tissue that is retained in vivo during hysterectomy and concluded that approximately 50% of their large sample continued to show clinical signs of ovarian hormone production (i.e. vaginal tissue maintenance) but the other 50% did no. Clinically, these lesions manifest as extra uterine pelvic masses that compress the urethra, bladder neck, or ureter producing symptoms of varying degrees of urinary outflow obstruction or secondary hydroureteronephrosis [14]. On ultrasound, a typical leiomyoma with a whorled appearance, with variable echogenicity depending on the extent of degeneration, fibrosis, and calcification is seen [15]. Transvaginal ultrasound helps in diagnosing round ligament fibroid because it allows clear visual separation of the uterus and ovaries from the mass. Magnetic Resonance Imaging (MRI), with its multiplanar imaging capabilities and the distinctive appearances of typical fibroids is extremely useful in differentiating them from solid malignant pelvic tumours. Research indicates that the tumour results from a single progenitor smooth muscle cell which undergoes somatic mutation. Subsequent growth occurs by clonal expansion of the mutated myocyte [16].

In the present case it can be predicted that the tumour must have arisen from myocytes lying in the remnant of round ligament leftover after hysterectomy. The intact active ovaries must have supplied the necessary estrogen rich environment for proliferation. Besides genetic predisposition and ovarian hormones that play a major role in tumour expansion, a large number of growth factors have also been identified which favour expansion. These are IGF (Insulin like growth factor), EGF (Epidermal growth factor) and PDGF (Platelet-derived growth factor), TGF beta (Transforming growth factor beta) and BFGF (basic fibroblast growth factor) [16]. These may have role to play in the expansion of tumour in the present case.

CONCLUSION

The occurrence of an intra peritoneal round ligament fibroid in an already hysterectomised woman is very very rare. Only a few cases have been reported in the literature. Extra-uterine fibroids occur infrequently, although they are histologically benign, may mimic malignant tumours at imaging, and may present a diagnostic challenge. The clinical symptoms and imaging features depend on the location of the lesion and on its growth pattern. So, extra-uterine fibroid should be

considered in the differential diagnosis of pelvic masses even in the post-hysterectomy state.

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