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Case Report

Meigs syndrome revealed by bilateral ovarian fibroma in postmenopausal woman

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Abstract

Ovarian fibroma is one of the rarest solid tumor of the ovary. When it is associated to ascites and to a pleural effusion it realized the rare entity known as Demons Meigs' syndrome.

The diagnosis of this type of tumors is often difficult and it is usually diagnosed through histopathological examination. A malignant tumor must be eliminated especially when it's associated to an elevated CA 125 serum level. It is confirmed by histopathological examination of surgical specimen.

Surgery is the unique treatment of this syndrome by removing the ovarian fibroma (cystectomy) in young women or by salpingo oophorectomy in old one. The resolution of peritoneal and pleural effusion after tumors removing without recurrence confirmed the diagnosis of Meigs syndrome.

We report a case of Meigs'syndrome in post-menopausal woman revealed by bilateral ovarian fibroma associated to elevated CA125 serum level mimicked an ovarian malignancy process.

Key words: meigs'syndrome; pseudo Meigs; ovarian fibroma; CA 125; ascites.

Introduction

Ovarian fibroma is a rare and the most common benign tumor growing from the connective tissue of the ovarian cortex.

It's composed of intersecting bundles of spindle cells [1].

The syndrome associated ovarian fibroma, ascites and hydrothorax was described in 1892 by Tait, known later in 1937, as Meigs' syndrome (related to Meig and Cass) [2].

We report a case of Meigs' syndrome associated bilateral ovarian fibroma ascites and elevated CA125 serum level in post-menopausal woman, mimicked an ovarian malignancy.

A laparoscopic exploration followed by a laparotomy to confirm the diagnosis was made.

A bilateral salpingo-oophrectomy was performed, specimens were taken from epiploon and ascites fluid for histopathological examination that confirmed the diagnosis of Meigs' syndrome. The post-operative course was uneventful.

Observation (case presentation)

A 60 years old postmenopausal women, gravida 4 para 4 without hormonal replacement treatment.In her past history, she was treated for high blood pressure by calcium channel blockers, she was hemodiyalised and she had a right thyroid isthmolobectomy. She complained of an abdominal swelling 2 months ago with a pelvic pain.

On physical examination, she has good nutritional status. She was not pale, her blood pressure was 140/90 mmhg , her weight : 72 kg and her tall: 167 cm.

Abdominal examination revealed a pelvic distension and a bilateral latero uterine mass were palpated. There was a dullnes on percussion.

On vaginal examination: vagina and cervix were normal. A bilateral mass was palpated, seemed separated to the uterus, firm mobile and no painful. The right one size was 12 cm approximately and the left one was 7 cm.

Liver and pleuro pulmonary examination were without abnormality.

There were no palpable lymph nodes.

Trans abdominal followed by trans vaginal ultrasound examination revealed a bilateral adnexial mass: both were solid hyper echoic, well circumscribed measuring at right 14/10 cm and at left 8/5 cm, blood flow (Doppler) was detected in their surfaces and a highly abundant ascites.

The liver was normal.

The chest X-ray showed a small right pleural effusion.

A pelvic Resonance magnetic imaging (RMI) showed a bilateral ovarian tumor, solid and well circumscribed that exhibited low intensity signals on both T1 and T2 weighted images: the right one measured 98/70/84 mm, the left one 80/50/73 mm. **(figure 1 a, b)**. It showed also a moderate ascite.

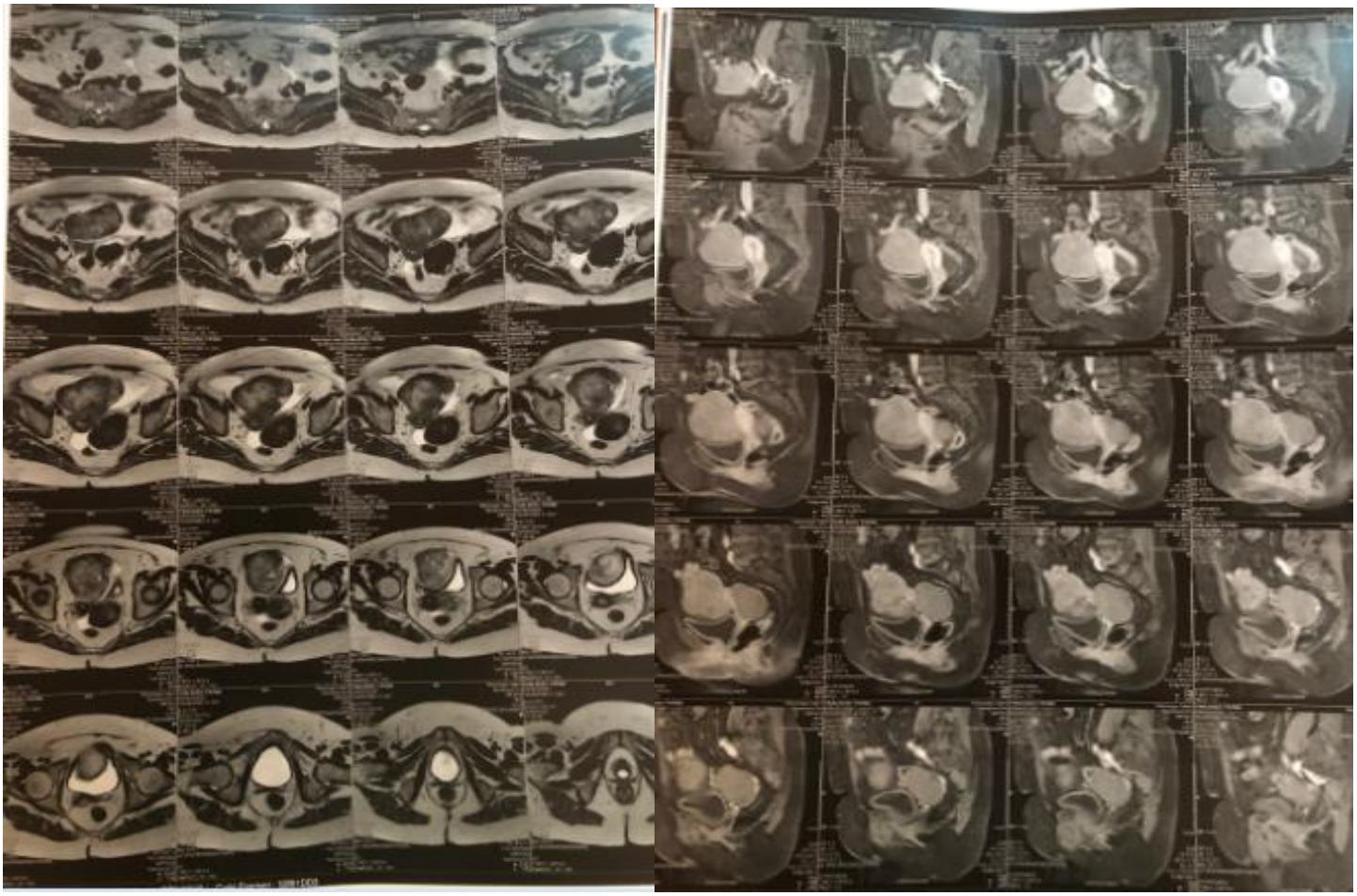

Figure 1A: RMI showed a bilateral ovarian tumor.

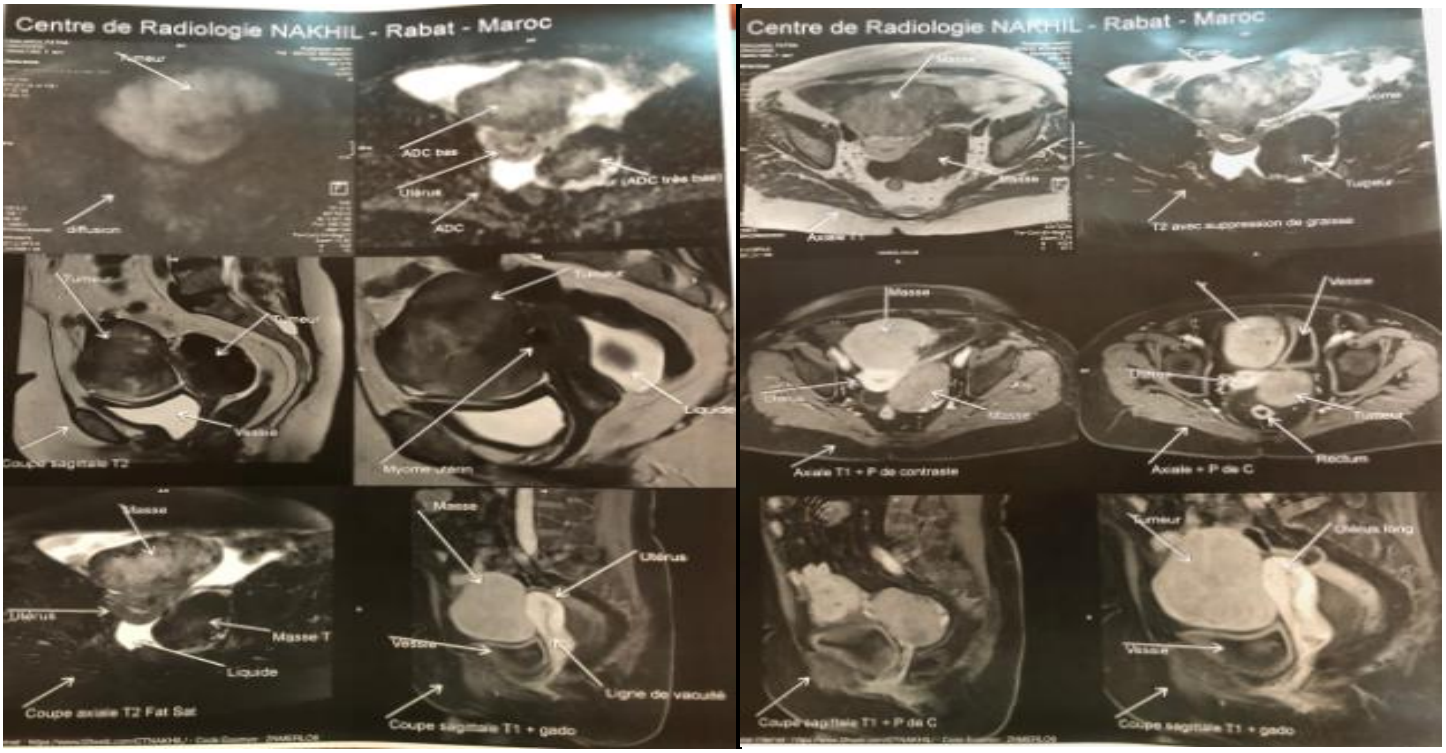

Figure 1B: the bilateral ovarian tumor on RMI magnification.

She had elevated tumor markers: CA125 was increased at 252 UI/ml, the HE4 at 861 pmol/l and the ROMA (Risk of Ovarian Malignancy Algorithm) at 95 %.

She was counseled and agreed to surgical exploratory. Laparoscopy followed by explorative laparotomy founded moderate ascites abundance, a bilateral adnexial ovarian solid mass. The right tumor was 14/8 /6 cm, the left one 10/4,5/4 cm. The uterus appeared normal, there was no palpable nodes and no liver or epiplooiques granulation. About three liters of ascetic fluid was drained and sent for cytological analysis.

Bilateral salpingo oophorectmy was performed and specimens were taken from epiploon for histopathological examination**. (figure 2 a , b)**

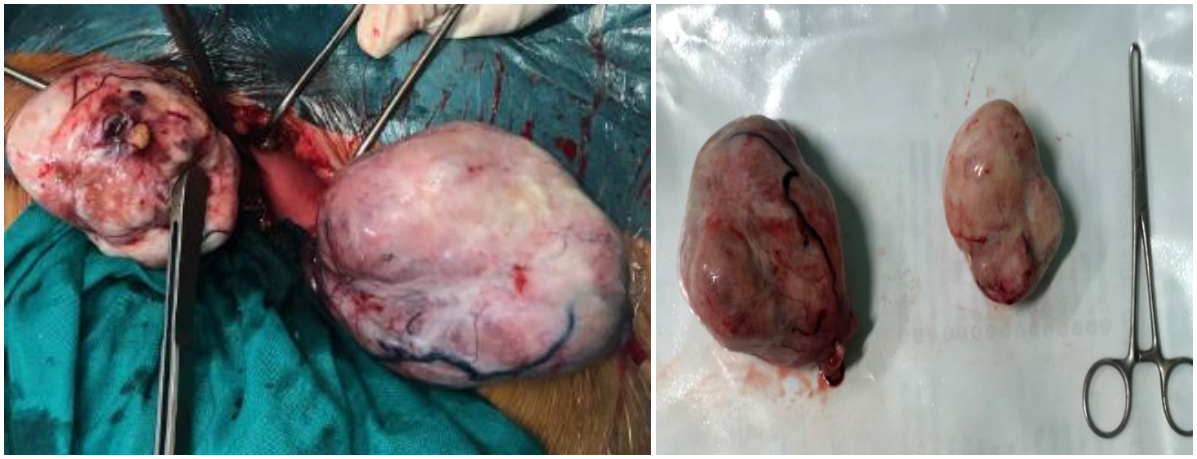

Figure 2AB: bilateral salpingo oophorectmy removing both tumors.

She had no complications in her post-operative period.Macroscopically, both of ovarian tumors were solid and firm, there surfaces were smooth. Histologically on section, they were white-gray and composed of whorls of spindle-shaped cells with interlacing bundles of collagen. There was no atypia , no pleomorphism,no mitotic count or necrosis , consistent with bilateral ovarian fibroma. **(Figure 3 a, b)**

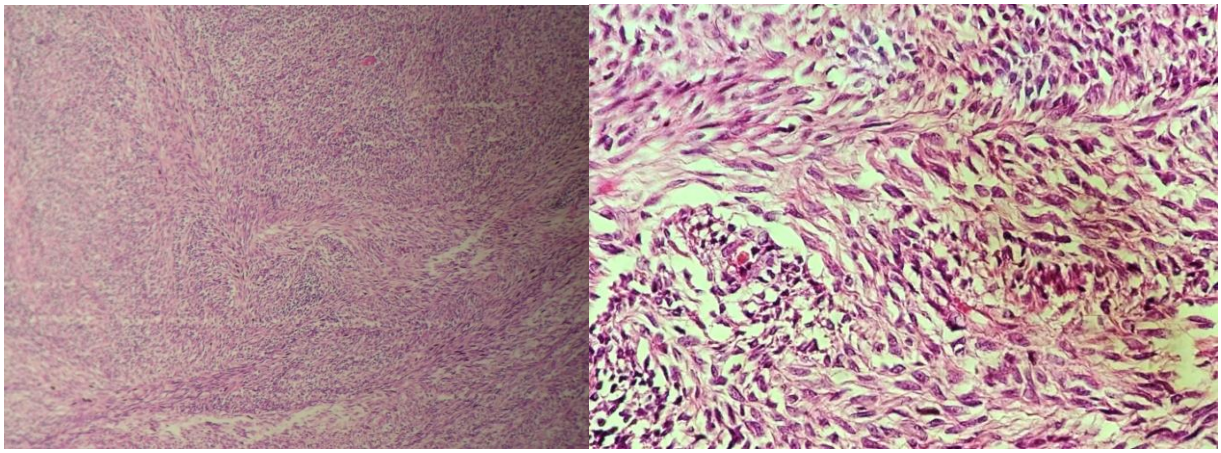

Figure 3: tumor proliferation of fasciculated architecture, cells with regular and non-atypical nuclei, magnification x100 and 400.

She was seen for control one month and three months later, she was healthy. And there was complete resolution of ascites on Tran's vaginal ultrasound examination. The chest Rx control was normal.

Discussion

In the WHO histopathological classification of tumors of the ovary, fibroma or leiomyoma is classified under the sex cord stromal tumors. [3]

Leiomyoma is one of the rarest solid tumor of the ovary, it accounts for 4 % of all ovarian tumors [4] and 0, 5-1 % of the benign ones [5-6-7]. It is encountered in women aged between 20 and 65 years with only one sixth of cases occurring after menopause as it's our patient age.

Diagnosis of this type of tumors is often difficult and it is usually diagnosed through hitopathological examination [5]. A malignant tumor must be eliminated especially when the ovarian fibroma is associated to ascites and or to a pleural effusion which realized the rare entity known as Demons Meigs' syndrome. Meigs was the first who reported that the ascites and the hydrothorax disappeared after surgical removing of the ovarian fibroma [6] and before any other therapy. The pleural and peritoneal biopsies are negative.

He had selected four characteristics to define this syndrome:

-the tumor is benign fibroma or fibroma like tumor of the ovary. [7]

-ascites.

-Pleural effusion.

-removal of the tumor must cure the patient without recurrence.

The main differential diagnosis in this syndrome is a malignant ovarian process especially when it's associated to an elevated CA 125 serum level as it was in our case and as it's in the most case that were described in literature with an average between 286 and 2360 UI/ L [8].

The pathogenesis for the pleural and peritoneal effusions is not clearly known. The important factor in the formation of ascites and pleural effusion seems to be the tumor size [2-9]. Fibromas more than 10 cm in diameter are associated with ascites in up 40 % of cases as it's our case and Meigs' syndrome in approximately 1 % of the cases [9].

Meigs suggested that the fluid in the abdomen originated from the edematous fibroma that can leak fluid [6-9]. Peritoneal irritation by the tumor may stimulate the production of peritoneal fluid that can diffuse into pleural cavity because of the negative intrathoracic pressure [9].

The diagnosis is based on pelvic ultrasound associated to flow Doppler. The CT and RMI are interesting to detect a peritoneal or epiplooic granulation witch their absence will be sign of benignity.

Surgery is the unique treatment of ovarian fibroma by laparoscopic and or a laparotomic exploration. The diagnosis is evoked in front of an encapsulated tumor and the absence of

Peritoneal or omental implant.The salpingo oophorectomy can be considered in peri menopausal or post-menopausal women, ovarian preservation and cystectomy should be performed in youths.

Histopathological examination of the surgical specimen confirmed the diagnosis of ovarian fibroma by revealing proliferation of spindle cells resembling fibroblasts, forming vague storiform pattern without cytologic atypia or mitosis.

Microspic examination of the peritoneal and epiploic specimen were negative.

The resolution of peritoneal and pleural effusion after tumor removing confirmed the diagnosis of Meigs syndrome.

Conclusion

The association of ovarian fibroma, ascites and pleural effusion is the classic triade known as Meigs' syndrome. Their coexistence may masquerade as carcinoma. This syndrome should be considered as malignant process until proven otherwise. Its diagnosis is based on pelvic ultrasound, CT or RMI can sometimes be used to diagnose and differentiate it from leiomyosarcome .Explorative laparoscopy or laparotomy for histological examination confirmed the diagnosis of ovarian fibroma .The negativity of microscopic examination of ascites, epiploic and peritoneal specimen, the complete resolution of ascites and pleural effusion after surgical removing of the ovarian tumor made the diagnosis of Demons Meigs's syndrome.

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