Journal of
Gynecology and Women's Health
ISSN 2474-7602

Juniper Publishers
key to the Researchers

Mini Review
Volume 24 Issue 5 - April 2023
DOI: 10.19080/JGWH.2023.25.556153

J Gynecol Women's Health

Malignant Transformation of A Dermoid Cyst of the Ovary "Case Report"

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Submission: April 11, 2023; **Published:** April 17, 2023

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Abstract

Malignant transformation of a mature cystic teratoma is a rare pathology, reported in only 1% to 2% of cases, transformation is often to squamous cell carcinoma. We present the case of a degenerated dermoid cyst discovered in a 51-year-old woman who underwent adnexal surgery for an ovarian mass. We discuss the difficulties of diagnosis of these poor prognosis tumors as well as the management modalities that remain poorly defined.

Keywords: Dermoid cyst; Degeneration; Diagnosis

Introduction

Mature cystic teratoma (MCT), also known as dermoid cyst of the ovary, accounts for 10-20% of all benign ovarian cysts. Malignant degeneration of an ovarian dermoid cyst is reported in 1-2% of cases [1]. Given the rarity of this malignant transformation, we report this case through which and through the data of the literature we will discuss the modalities of management of this pathology.

Patient and Observation

a) Patient information: A 51 year old female patient, with no notable pathological history, presented with amenorrhea, without any other associated signs.

b) Résultats cliniques: the physical examination was strictly normal.

c) Diagnostic process: which motivated the performance of an ultrasound scan revealing the presence of a right ovarian mass with a double component of tissue and non-vascularized fat on the Doppler scan, measuring 104*62mm, suggesting an ovarian teratoma (Figure 1&2).

d) Therapeutic intervention and follow-up: The patient underwent a right adnexectomy by Pfannenstiel with peritoneal cytology.

e) Pathological study: Morphological appearance of a moderately to well-differentiated squamous cell carcinoma, infiltrative and poorly keratinizing, arising on a dermoid cyst (cancerized dermoid cyst). Hemorrhagic and inflammatory cytology. The patient was referred to our institution and an enlarged colophysectomy and a left adnexectomy with bilateral pelvic curage and omentectomy were performed by median laparotomy (Figure 3).

Discussion

Malignant degeneration of a TKM is a rare pathology that is mostly observed in postmenopausal women [2]. However, this pathology can also occur in young girls of 20 years and even younger [3]. The clinical symptomatology of cancerous dermoid cysts is similar to that of benign ovarian cysts, including pelvic pain, abdominal distension, transit and micturition disorders, dyspareunia and ascites [4].

To make the diagnosis, ultrasound has a prominent place in the detection and monitoring of dermoid cysts [5]. However, the limitation of ultrasonography is explained by its sensitivity, which does not allow to distinguish a secondary transformation from a TKM [6], although our patient did not benefit from a CT scan, This examination allows detection and characterization

based on the detection of fat density in 88% of cases and on the identification of a Rokitanski protuberance in 91% of cases, easily recognized by its rounded shape, with clear internal borders, containing teeth, adipose tissue and connective tissue taking up the contrast medium late . On MRI, the appearance of the dermoid cyst is considered less characteristic, the fat, but also the hemorrhagic lesions appear hyperintense in T1, the introduction of the fat suppression sequence allows them to be differentiated [7]. As for biology, authors have tried to determine the usefulness of tumor markers to distinguish benign MCT from malignant transformation, CA125 is often elevated in ovarian tumors but Kikkawa et al. [8] reported that the average levels in patients with degeneration were lower than those observed in more common ovarian cancers [8].

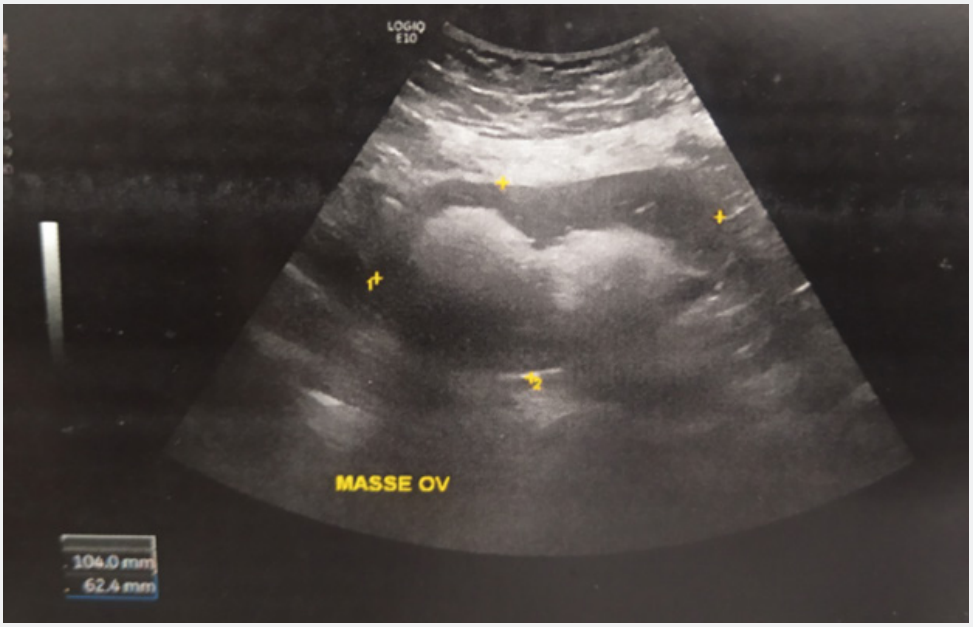

Figure 1: Ultrasound image of a right ovarian mass Complemented by a pelvic MRI which showed a right ovarian lesion of organic germinal nature related to a mature cystic teratoma, without any atypical sign.

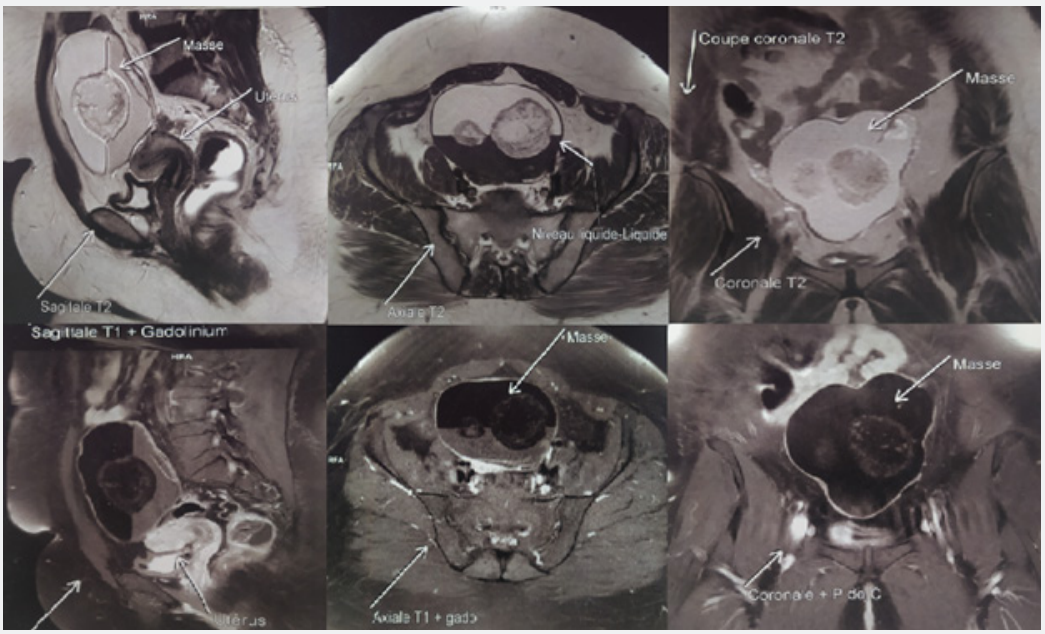

Figure 2: Pelvic MRI showing a right ovarian lesion of organic germinal nature related to a mature cystic teratoma.

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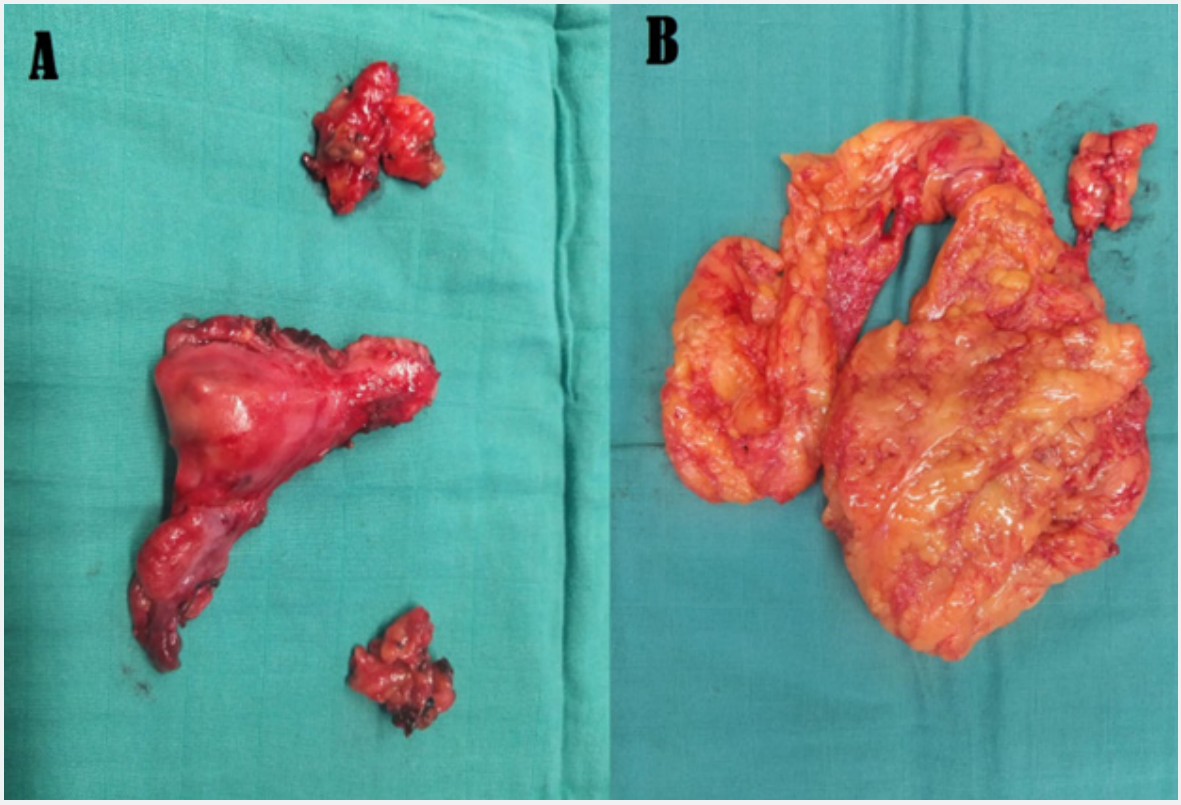

Figure 3: A- Operative part uterus, left adnexa and pelvic curage B- Omentum Anatomopathological study showed no tumor residue or affected lymph nodes at the level of the curage. The patient is put under surveillance, no sign of recurrence after 6 months.

Any excess of the threshold value of the serum SCCA level (≥2ng/ml), upon discovery of a dermoid cyst and regardless of the tumor volume, should lead the clinician to perform further investigations for suspicious elements that may influence the surgical course, in order to avoid the dissemination of possibly neoplastic fluid [2]. Nevertheless, in the case of small tumors, or in the early stages, a level of less than 2ng/ml does not eliminate the diagnosis of malignant transformation.

The optimal treatment of mature cancerous teratomas of the ovary is not yet well established. Given the rarity and limited number of cases described, there is no consensus on the therapeutic management of this condition [5]. Surgical treatment of malignant transformation of TKM is similar to that of epithelial ovarian cancer [9].

Chemotherapy has emerged as the most effective adjuvant therapy in the therapeutic management of ovarian cancer, and several chemotherapy protocols can be used in this setting as long as a platinum salt is included [10]. Most authors have reported that malignant transformation of TKM has a poor prognosis [5, 10]. Kikkawa et al. [8] reported a 5-year survival of 95% for stage I patients, 80% for stage II patients, and 0% for stages III and IV(FIGO).

Conclusion

Malignant degeneration of ovarian dermoid cysts which is of poor prognosis is exceptional; there is no formal criteria for diagnosis before pathological analysis, and therefore surgery.

Author's Contributions

Najib BHAROU and Karim BELLARABI were responsible for the diagnosis, clinical and surgical management of the patient. Najib BHAROU et Karim BELLARABI drafted the manuscript. Hafid HACHI participated in supervision, writing of the original draft, reviewing and editing of the manuscript for intellectual content. All authors read and approved the final manuscript.

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