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Case Report

Case report of a giant serous ovarian cystadenoma in a patient with a large abdominal mass*

Relato de caso de um cistadenoma seroso gigante de ovário em paciente com grande massa abdominal

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RESUMO: Introdução: Cistos ovarianos são coleções de líquido comumente vistos em mulheres durante todo o tempo de vida. Na maioria dos casos, os cistos serão benignos e podem ser gerenciados de forma conservadora. Dentre os tumores epiteliais, os cistadenomas serosos são um dos mais comuns, correspondendo de 15 a 25% dos casos. Método: No presente estudo, foi relatada uma experiência rara obtida com paciente atendida no Hospital São Vicente de Paulo de Minas de Gerais (HSVP-MG), diagnosticada com um cisto ovariano gigante e discutido os aspectos fisiopatológicos, diagnósticos e terapêuticos do caso. Relato de caso: Paciente do sexo feminino, 42 anos, natural de Juiz de Fora - MG, foi submetida a uma cirurgia eletiva de herniorrafia umbilical no HSVP. Durante a cirurgia, no momento da incisão, identificou-se um volume na cavidade abdominal. Houve correção da hérnia e realização de uma tomografia, que constatou a massa medindo cerca de 27,7 x 19,6 x 26,2 (T x AP x L). Vinte dias depois, a paciente foi submetida à laparotomia exploradora com exérese do cisto detectado e aspiração de 13 litros de líquido do seu interior e do próprio ovário. Em seguida, foi realizada a biópsia do material colhido, que indicou ser um cistadenoma seroso, aderido à tuba e ao ovário esquerdo. Conclusão: A paciente se enquadra dentro dos casos de cistadenomas serosos, dentro da faixa etária de ocorrência para massas benignas e encontrava-se assintomática. O exame de escolha foi ultrassonografia para reconhecimento do tumor e laparotomia para melhor resolução do caso.

PALAVRAS-CHAVE: Cistos Ovarianos; Antígenos de Neoplasias; Neoplasias Ovarianas; Cavidade Abdominal.

ABSTRACT: *Introduction:* Ovarian cysts are collections of fluid commonly seen in women throughout their lifetime. In most cases, the cysts are benign and can be managed conservatively. Among epithelial tumors, serous cystadenomas are one of the most common, accounting for 15 to 25% of cases. *Method:* In the present study, we report a rare experience obtained with a patient seen at Hospital São Vicente de Paulo de Minas de Gerais (HSVP-MG), who was diagnosed with a giant ovarian cyst, and discuss the pathophysiological, diagnostic, and therapeutic aspects of the case. *Case report:* A 42-year-old female patient, born in Juiz de Fora - MG, underwent an elective surgery for umbilical herniorrhaphy at HSVP. During surgery, a volume was identified in the abdominal cavity at the time of incision. The hernia was corrected and a CT scan was performed, which showed the mass measuring about 27.7 x 19.6 x 26.2 cm (T x AP x L). Twenty days later, the patient underwent exploratory laparotomy with exeresis of the detected cyst and aspiration of 13 liters of fluid from its interior and from the ovary itself. A biopsy of the collected material was then performed, which indicated that it was a serous cystadenoma, adherent to the fallopian tube and to the left ovary. Conclusion: The patient fits the cases of serous cystadenomas, within the age range of occurrence for benign masses and was asymptomatic. The exam of choice was ultrasonography to recognize the tumor and laparotomy for better resolution of the case.

KEY WORDS: Ovarian Cysts; Antigens, Neoplasm; Ovarian Neoplasms; Abdominal Cavity.

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INTRODUCTION

Ovarian cysts are collections of fluid commonly seen in women throughout their lifetime. They are divided into three main groups: functional, benign, and malignant. In most cases, the cysts will be benign and can be managed conservatively and they are common clinical and sonographic findings. In premenopausal women, most ovarian masses are benign, as are many of the cysts seen in a postmenopausal patient. The overall incidence of malignancy is 1 in 1000 in a premenopausal patient and 3 in 1000 at the age of 50 years old[1].

Most ovarian cysts are incidental findings and patients are asymptomatic. Approximately one in 25 women will have an ovarian cyst causing symptoms at some point in their lives. Once the cyst is diagnosed, it is important to classify its characteristics using a transvaginal ultrasound. This classification in combination with clinical features such as pain, pressure, or fertility will guide treatment[1].

Functional cysts can be found in the neonatal period and in childhood and may be associated with sexual precocity. Although they are much more frequent in adolescents between 12 and 14 years of age. Most benign ovarian tumors are simple cysts, which can be follicular, being the most common cause of increased ovarian volume, or corpus luteum. The majority of women have larger than normal follicular ovarian cysts at some point in their lives. Fortunately, the vast majority of cases do not have a negative impact on their health or reproductive ability[2].

In contrast, the so-called follicular cysts are characterized by a small cavity in which the future egg grows. They are expelled in the middle of the menstrual cycle and are called cysts when they exceed two centimeters in diameter. Once cysts, they are developed from the stimulus of the pituitary gonadotropins. Lasty, the luteinic cysts result from the yellow body that has become cystic due to excessive bleeding in the follicular cavity or by stimulation of the luteinizing hormone (LH)[2,3].

During the reproductive period, most ovarian masses are benign (80%) and about 2/3 of them occur in women between 20 and 44 years old. The malignant ones occur later, although some of them manifest early[3]. The risk of developing epithelial tumors increases with age, so there is a decline in ovarian function marked by progressive gonadal aging[4]. In general, when it is detected, its size is large and imaging tests can assist in diagnosis[5].

The three main tumors that occur in the first decades of life are teratomas, serous and mucinous cystadenomas[6]. Benign cystic teratomas, or dermoid cysts, are composed of a variety of well differentiated ectodermal, mesodermal, and endodermal elements. About 80% of these tumors occur in the reproductive period, with higher incidence around 30 years of age, and they represent 10 to 15% of all ovarian tumors[3].

Epithelial tumors are characterized as serous and mucinous cystadenomas. The serous ones are the most common (15 to 25%), surpassed only by the benign cystic teratoma[3], although some studies consider the serous ones to be the most common[7]. They are often multilocular, rarely with thick septations, and may present papillary projections and calcifications and, when cut, they show a clear or brownish content. They are firm in consistency, broad-based, and pale in color, usually measuring 5 to 15 centimeters, rarely reaching larger dimensions[3,8].

In turn, mucinous epithelial tumors represent about 15% of benign tumors, they are generally larger than serous tumors and are multilobulated, cystic, with mucoid content, and brownish to the cut. They constitute the category of large abdominal tumors, reaching up to 50 centimeters in diameter[3].

In this report, we describe our experience with a patient seen at the São Vicente de Paulo Hospital in Minas Gerais (HSVP-MG) and discuss the pathophysiological, diagnostic, and therapeutic aspects.

METHOD

A descriptive, observational, narrative and reflective study was carried out from April to March 2022 on a female patient, born on July 8th, 1977, 42 years old, from Juiz de Fora - MG, who underwent elective surgery for umbilical herniorrhaphy at São Vicente de Paulo Hospital, Minas Gerais, on November 21st, 2019, in which a large abdominal mass was identified and later found to be a giant ovarian cyst.

The patient read, signed and agreed to the Informed Consent Form, in duplicate, in which she gave the researchers all the clinical, laboratory and/or histological data of her clinical/surgical case and the radiological and photographic documentation found in her medical record, for presentation at a scientific meeting and publication of the case in a scientific journal or book as a "Case Report". It should be noted that the ethical guarantees were respected in the research, as recommended by the Resolution of the National Health Council (CNS) 466/12. In addition, the director of the São Vicente de Paulo Hospital in Minas Gerais was asked to sign a consent form, and he granted authorization for the case report to be carried out in the institution, as recommended in the Operational Norm 001/2013.

CASE REPORT

The patient A. A. F. R., female, was born on July 8th, 1977, 42 years old, in Juiz de Fora – MG. She underwent an elective surgery for umbilical herniorrhaphy at the São Vicente de Paulo Hospital in Minas Gerais on November 21st, 2019. Initially, a volume was identified in the abdominal cavity with fluid extravasation. The hernia correction surgery proceeded normally, and the patient was then referred to new exams for analysis and possible diagnosis of the abnormality found.

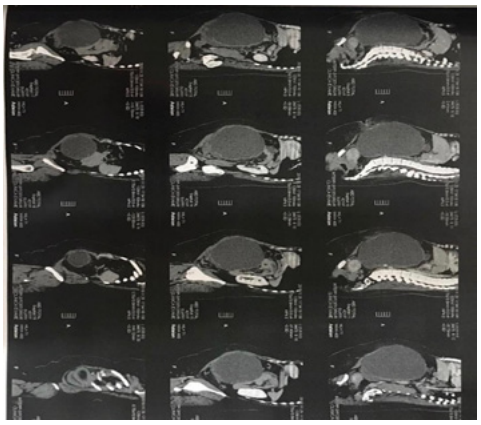

Figure 1 - Sagittal Computed Tomography (CT) section of the abdomen – encapsulated liquid collection occupying the entire peritoneal cavity.

The total abdomen ultrasound showed a huge cyst with anechoic content, occupying the abdomen from the xiphoid process to the pelvis (Figure 1; Figure 2). The uterus was normal and the ovaries were not visualized. Computed tomography of the abdomen and pelvis showed a voluminous expansile formation, predominantly cystic, measuring about 27.7 x 19.6 x 26.2 cm (T x AP x L) with apparent right adnexal origin, and superior extension up to the mesogastrium level (Figure 3). Laboratory tests for carcinoembryonic antigen (CEA) and CA 19/9 were performed, which showed normal values; on the other hand, the test for CA 125 showed a value of 90.8 U/mL – the reference is less than 35.0 U/mL. Twenty days later, the patient underwent exploratory laparotomy with exeresis of the cyst detected, with aspiration of 13 liters of fluid from its interior and from the ovary itself, oophorectomy and left salpigectomy. A biopsy of the collected material was then performed: at macroscopy, the cystic left ovary measured 22.0 x 23.0 x 5.0 cm, weighing 358g, as there had been fluid aspiration previously. The capsule was smooth in appearance and vascularized with calcification. The final diagnosis indicated it was a serous cystadenoma, adherent to the fallopian tube and left ovary, with extensive hemorrhage and cholesterol deposits, besides the fallopian tube with mesonephric remnants.

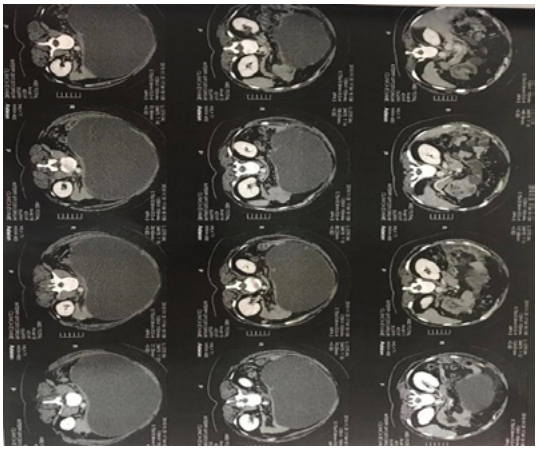

Figure 2 – Axial Computed Tomography (CT) section of the abdomen, with compression of viscera on posterior wall of the peritoneal cavity.

Figure 3 - Upper macroscopic view of the surgical specimen (ovarian cyst), measuring about 27.7 x 19.6 x 26.2 cm (T x AP x L).

DISCUSSION

Ovarian cysts are commonly diagnosed, but the giant cysts are of rarer appearance[1]. In the report issued by the sonographer, the following is reported: “immense cyst with anechoic content with rare thin septa, occupying the entire abdomen from the xiphoid process to the pelvis. Normal uterus, ovaries not visualized. May correspond to an ovarian cyst”.

Pelvic cysts can be originated by ovarian stimulation, gonadotropins and estrogen. By its complex characteristics: larger than 10cm, regular borders, absence of thick septations and a heterogeneous fluid, there is a signaling for a benign neoplastic cyst[2].

In the present report, we observed the case of a 42-year-old patient, a fact that corresponds to the age range observed in the literature for the incidence of benign ovarian tumors. Regarding symptoms, ovarian cysts in the early stages may cause general symptoms such as nausea, dyspepsia and abdominal discomfort9. When bulky, they can cause constipation or urinary retention[10,11]. However, most cases are asymptomatic as in the patient in question.

Before taking a surgical approach, 3 markers were requested in laboratory tests for tumor findings: carcinoembryonic antigen (CEA), CA 19/9 and CA 125. Based on the results of the aforementioned exams, the following evaluation was done:

- CEA at 0.72 ng/mL- REF less than 10ng/mL in non-smokers and less than 5ng/mL in smokers (value within normal range);

- CA 19/9 at 6.9 U/mL - REF 37 U/mL (value within normal range);

- CA 125 at 90.8 U/mL - REF less than 35 U/mL (value deviating from normal)[3].

The cancer antigen (CA) 125, the most sensitive tumor marker for epithelial tumors,[3,12] showed a significant increase in the laboratory examination.

Neoplastic cysts are those characterized as benign or malignant because of their growth pattern and tissue invasion[3]. The condition of the patient signals a benign clinical finding, since it influences the pathological elements of the cyst, as well as the onset, development and progression of the diagnosed abdominal mass.

For giant cysts, laparotomy is indicated, since there is a need for manipulation of the cyst to reach the ovarian pedicle and perform complete excision[11], as in the report. Deluca et al. propose preoperative percutaneous drainage of giant cysts[5] because there would be a decrease in complications, and they consider it a valid alternative to treatment[6].

CONCLUSION

Therefore, the patient fits the cases of serous cystadenomas, within the age range of occurrence for benign masses and was asymptomatic. The exam of choice was ultrasonography to recognize the tumor and laparotomy for better closure of the case.

Conflict of interest: The authors have no conflicts of interest to declare.

Authors' participation: Francesca Galvão de Moraes Delgado, Francielle Bianca Moreira de Mesquita, Ruan Teixeira Lessa, Marcelo Ribeiro Cesar, Enzo Amaral Avidago: Contributed to the conception, research, data collection and literature review, data analysis and interpretation, text writing and design. Artur Laizo: Contributed to the critical review and final approval of the text.

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