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Case Report

Giant Virilizing Tumor of Granulosa Cells of the Left Ovary Clinical Case

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ABSTRACT

Introduction: Ovarian steroid-producing tumors are rare entities and are potentially malignant. Testosterone is the hormone that is most frequently elevated and is mostly associated with signs of virilization.

Case presentation: A case of a 62-year-old patient was diagnosed with a virilizing giant tumor of ovarian granulosa cells. A programmed laparotomy was performed with a frozen biopsy and a total abdominal hysterectomy with double anicextomy plus omentectomy. I progressed favorably without complications.

Discussion: The case reported here is that of apatient with apparent health history, regular menstruation, with obstetric history of 4 pregnancies and of having undergone surgery at 24 years after a stillbirth of twins, in the face of virilization syndrome, data from the hospital medical history were used, Complementary examinations, the interview and the physical examination of the patient,

Conclusions: Despite the evolution time that the patient presented with the giant virilizing tumor of granulosa cells of the left ovary, the operation was successful and the evolution has been satisfactory. Thanks to the work of the medical staff that was in charge of the case, demonstrating once again the strengths of the Cuban health system in situations like these.

Keywords: Ovarian tumors; Virilization; Granulosa cells

INTRODUCTION

Ovarian tumors represent a great current challenge for gynecological diagnosis, they constitute the third group of tumors in women. Approximately one in ten women will have it throughout life, most of which will require a surgical evaluation. In Cuba in 2011, 383 cases with this diagnosis were reported [1]. These occur from early to advanced ages. Clinical experience reveals the high incidence in the climacteric stage, between 35 and 65 years of age [2-3].

Virilizing ovarian tumors present a prevalence of 0.2% of all causes of hyperandrogenism, including Sertoli-Leydig cell tumors, hilar cell tumors, lipoid cell tumors and, less frequently, granulosa-theca tumors. These types of virilizing tumors originate from the pluri-potential cells of the ovarian stroma, have the ability to secrete 17-hydroxyprogesterone, testosterone and androstenedione, triggering hyperandrogenism, with characteristic clinical manifestations. Ovarian granulosa cell tumor accounts for 2% to 5% of all ovarian tumors. As its name indicates, it derives from granulosa cells, which are responsible for the production of estradiol, they belong to the group of sex cord-stroma tumors of the ovary, constituting 70% [4-6].

Unlike most ovarian tumors, which originate in the epithelial cells that line this organ, granular cancer occurs in stromal cells. These not only make up the connective tissue that gives consistency to the organ but are also responsible for producing female hormones. Microscopically they are formed by granulosa cells; they can appear alone or in combination with other stromal elements. These granulosa cells are small, pale, round or oval, with coffee bean nuclei. Call-Exner bodies are characteristic and appear in 30% to 60% of cases; they are small cystic areas of fluid and cellular debris around well differentiated granulosa cells, as evidenced in the case presented [7].

Two histopathological subtypes are recognized, one adult and the other juvenile: the first occurs mainly in peri and

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postmenopausal women, with a peak between 50 and 55 years, while the juvenile form is observed in girls and young women, the majority in the first three decades of life. They are usually unilateral tumors, yellowish in color and with a smooth lobulated surface, whose size can vary from a few millimeters to 20 cm or more in diameter. They can produce female or male hormones (virilizing effect on women); however, those that produce estrogens are the most frequently found, accounting for three-quarters of granulosa tumors [8].

It is accepted that they are tumors with a low degree of malignancy, of slow evolution and preferably local dissemination. Their prognosis, in general, is good and recurrences after treatment are infrequent when they are diagnosed in less advanced stages [9].

Due to the infrequency of the androgen-secreting Granulosa Cell Tumor (GCT) and taking into account the florid symptoms of the almost totally androgenized patient with the result of Biopsy #5194 HC 1008514, a granulosa tumor was found as a histopathological diagnosis. For this reason, it was decided to present this case, in order to describe the clinical picture and histopathological finding of a patient with a virilizing giant tumor of granulosa cells of the left ovary.

Development

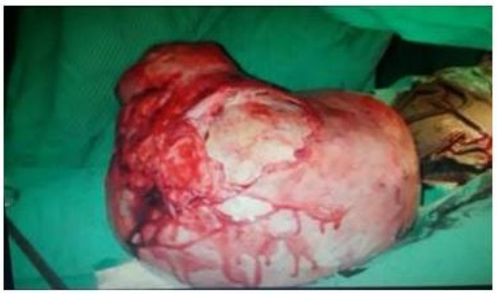
Clinical case

62-year-old female patient with apparent health history, regular menstruation, with obstetric history of 4 pregnancies and having undergone surgery at the age of 24 for a stillbirth of twins, after said operation the patient reports that her menstruation was progressively diminishing until he saw her no more. She went to the ´´Carlos Manuel de Céspedes´´ Hospital in the Bayamo municipality, Granma province, due to an increase in the volume of the abdomen approximately 7 years ago, pain in the lower abdomen and increased hair loss on the face, chest and abdomen 5 years ago, she reports that since she was young she had a mustache but that at that time it had intensified.

On physical examination, she had an adequate state of coloration and hydration of the mucous membranes and integuments; head and neck unaltered; cardiopulmonary state without apparent damage, globular abdomen, palpable a giant tumor that extends from hypogastrium to epigastrium, painful, hard and firm consistency. External genitalia with android distribution of pubic hair, the labia majora covered the minors; clitoral hypertrophy, hair on the face, chest and abdomen, decreased fat pad, loss of female body contour.

The gynecological ultrasound reported: Uterus of normal size, isogenic image is observed that occupies the entire lower abdomen up to 4 cm above the navel, no free fluid in the cavity. Both kidneys of normal size and appearance. Based on the results of the complementary tests and the hyperandrogenic syndrome on physical examination, a diagnosis of a virilizing giant ovarian tumor was made.

Exploratory laparotomy with freezing biopsy: a 25 cm malignant granulosa cell tumor with high-grade gyriform, trabecular and tubular patterns plus a dermoid cyst. For this reason, the patient undergoes a total hysterectomy with double adnexectomy plus omentectomy.



A tissue mass corresponding to the ovary measuring 23 × 25 × 19 cm is received at the Department of Pathological Anatomy, with a smooth, shiny, reluctant external surface, which shows the outflow of bloody fluid. A tumor area with small cystic formations with predominance of yellowish color is also observed, with reddish-brown areas, another cystic formation occupied by fat and hair is also observed, macroscopically it impresses "malignant", which had been corroborated in the biopsy by freezing (Figure 1).

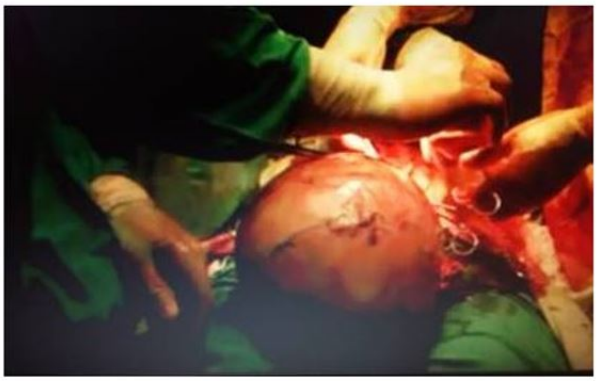


Figure 1: Mass of tissue corresponding to the ovary measuring 23 × 25 × 19 cm, smooth, shiny and resistant external surface.

There were no postoperative complications, at 32 h after the operation, the patient presented significant relief of clinical symptoms. Once recovered, she was referred to the oncologist to receive chemotherapy. After several consultations, the patient returned home, with follow-up by her health area and the multidisciplinary team composed, mainly by oncologists, gynecologists and psychologists. Adequate acceptance of the disease by the patient is corroborated. The case presented occurred in 2013, currently the patient is alive, awaiting another consultation with the oncologist in June.

DISCUSSION

Faced with a picture of Virilization syndrome, it is essential to make a complete evaluation that includes a clinical history and complementary tests aimed at identifying the source of androgens.

The clinical evolution of the patient showed severe signs of androgenization, which coincides with what has been reported in the case of androgen-secreting granulosa cell tumors, which states that if the disease is allowed to evolve, breast, uterine, and male habit. Furthermore, almost all granulosa cell tumors are unilateral, with a yellowish-brownish appearance when cut, which is consistent with the pathology report of the case. 30% of granulosa cell tumors do not produce steroid hormones or in other cases, the levels of hormone production are so low that they cannot be used for the evaluation of the follow-up of these tumors. For this reason, the hormonal test was not used to monitor the patient, in addition to the fact that we do not have the necessary resources to do so [10].

Germ cell tumors originate in the primordial elements of the female gonads and comprise one third of all ovarian neoplasms. Mature cystic teratoma, also called a dermoid cyst, is by far the most common subtype; represents 95% of all germ cell neoplasms, its clinical behavior is benign. This is raised because in the frozen biopsy report the patient had a dermoid cyst. 8, 11

Surgical management is considered for this type of tumors as standard treatment, with resolution of the symptoms and normalization of the hormonal profile. Given the robust characteristics of the tumor, laparotomy has been widely used as the initial surgical approach. In this case, a hysterectomy with double adnexectomy plus omentectomy was necessary due to the result of the frozen biopsy [11].

Granulosa cells and theca cells make up 5% of ovarian tumors. They are potentially malignant due to the fact that there are between 5 and 25% of recurrences, associated with hyperplasia or endometrial carcinoma, cystic changes of the breast, due to the fact that they produce a lot of estrogen, and ductal carcinoma with an associated masculinization sign is not rare. In this case, the patient did not present any of these alterations [7,8,11]

Ovarian cancer responds well to surgery and chemotherapy, the prognosis depends to a greater extent on the clinical stage where the tumor is diagnosed. Radiant treatment is used when there is infiltration of the abdominal wall or at the level of other structures. In this case, radiation therapy was not necessary because the patient did not present, despite the time of evolution of the disease, any of these alterations [2,5,8,11]

CONCLUSION

Despite the time of evolution that the patient presented with the giant virilizing tumor of cells of the granulosa of the left ovary, the operation was a success and the evolution has been satisfactory, thanks to the work of the medical staff who was in charge of the case. Demonstrating once again the strengths of the Cuban health system in situations like these.

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