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Case Report

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Ovarian Lipoma: A Case Report and Literature Review.

Banita Gurung*

Consultant Pathologist, Coordinator-Department of Pathology and Laboratory Medicine.

***Corresponding Author**
Banita Gurung, Consultant Pathologist, Coordinator-Department of Pathology and Laboratory Medicine.

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Abstract

Tumor of lipomatous origin in the ovary is exceedingly rare. Here we report a case of lipoma in the right ovary in a 41-year-old female who had a borderline serous tumor of the left ovary. The ovarian lipoma was an incidental finding on evaluation of the surgical specimen in the pathology department. We are presenting this case because of the rarity.

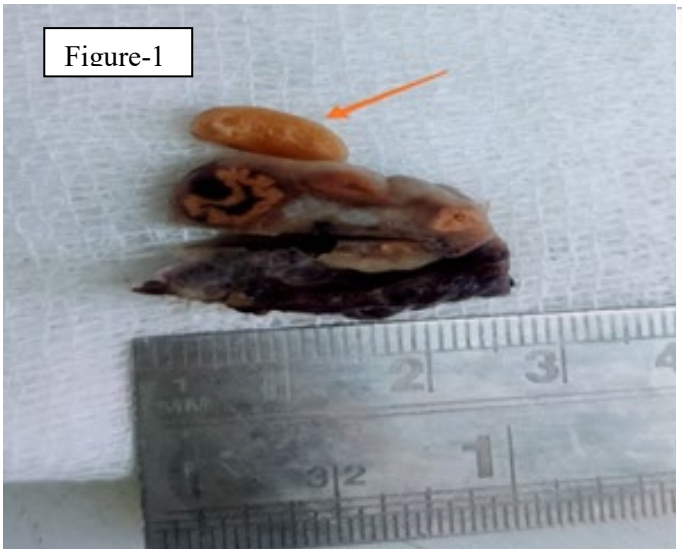
1. Introduction

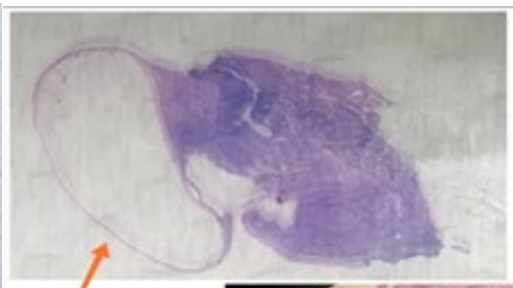
The occurrence of pure lipoma in the internal female genital tract is extremely rare [1]. Some cases of fatty tumors of the uterus, ovaries, and fallopian tubes have been reported in the literature which is mostly trachomatous in origin [2]. Due to the rarity of the cases, the frequency and etiology remain unknown [3]. Based on our literature search, we found only three cases of ovarian lipoma reported so far. Here we report a case of ovarian lipoma found in the right ovary in a 41-year-old female with a borderline serous tumor of the left ovary.

2. Case report

A 41-year-old female presented to Nepal Cancer Hospital and Research Center with abdominal fullness for 3 months and abdominal pain for 1 month. General examination was unremarkable. Per vaginal examination showed the fullness of left fornix and normal right fornix of the vagina. Radiological findings by Ultrasonography and computer tomography scan of abdomen and pelvis revealed a large cystic lesion with peripheral enhancing nodular soft tissue component in left adnexa abutting the uterus and adjacent bowel loop, suggestive of cystic solid enhancing ovarian tumor. However, no lesion was detected in radiological images. The serum cancer antigen-125 (CA-125) was 389.8 µ/ml. The patient underwent total abdominal hysterectomy with bilateral salphingo-oophorectomy + pelvic peritonectomy + bilateral pelvic and para-aortic lymph node dissection + total omentectomy + bilateral sub diaphragm peritoneal sampling for left ovarian tumor.

The diagnosis of a borderline serous tumor of the left ovary was established after the evaluation of the surgical specimen in the pathology department. On gross examination, a small gray yellow soft mass on the right ovary was seen. The lesion was well-circumscribed and measured 1 cm x 0.7 cm x 0.6 cm. The outer surface was smooth, intact and the cut surface was solid, yellow, and homogeneous. Areas of hemorrhage, necrosis were not appreciated [Figure-1]. The microscopic picture showed the presence of a well-circumscribed lesion consisting of matured adipocytes along with a few interlacing fibrous bands in between and thin-walled capillary-sized blood vessels. The final diagnosis of ovarian lipoma of the right ovary was made. Features of borderline tumor or teratoma in the right ovary were not seen. [Figure-2A and 2B]





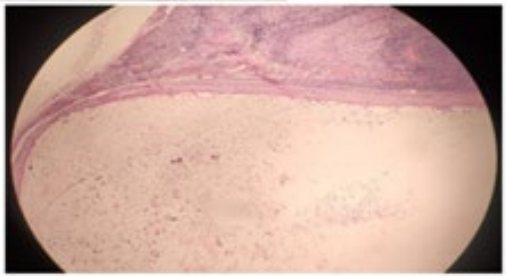


Figure 1: Gross Picture of Lipoma on The Surface of The Right Ovary. Arrow)
Figure 2A: Microscopic Photomicrograph of Lipoma Attached to The Surface of The Right Ovary. (Arrow)
Figure 2B: Photomicrograph of H&E stained section of the lipoma of the right ovary.

3. Discussion

Although the ovary is a common site for both benign and malignant lesions, tumors of lipomatous origin are rare [4]. Usually, lipomas of other sites are found in the 4th and 5th decades of life where etiology is still unclear. These tumors are usually asymptomatic, unilateral, growing more than 10 cm [2,3]. Some constitutional factors and obesity may be associated with the growth of the tumor [3]. The origin of this tumor in the internal genital tract of a female is rare and unclear [4]. The adipose tissue in the ovary is not native, so different mechanisms have been suggested for the development of ovarian lipoma in literature [2,5]. Embryonic misplacement of the fat cells and metaplasia of ovarian stromal cells into the fat cells are some of the important proposed mechanisms [3]. Most of the ovarian lipomas are known to be part of mature teratoma and treatment of which may vary from just the lipoma of the ovary. Teratomas are the most common fat-containing ovarian neoplasm which contains tissue from all three germinal layers (ectoderm, mesoderm, and endoderm) that include adipose tissues along with other components like bone, cartilage, skin adnexa, and others [6]. However, our patient had a well-circumscribed lesion of mature adipocytes on the right ovary and tissues from other germ layers were not present even in the extensive sampling. Hence, the diagnosis of a lipoma was considered over teratoma.

Malignant mixed Mullerian tumors (carcinosarcoma) can also have adipose tissues as its component but are malignant in nature. Carcinosarcoma is a biphasic tumor that has malignant carcinomatous components like endometrial carcinoma and sarcomatous components like liposarcoma and others [7]. The absence of nuclear atypia, lipoblast, and atypical mitoses in the microscopic examination helps to exclude liposarcoma [3,4]. In our case, the tumor did not have any malignant microscopic features.

The microscopic appearance of ovarian lipoma is similar to the other lipomatous tumor arising in other parts of the body [3]. Lipoma of the other sites such as the pelvis also has to be ruled out with the help of clinic radiological correlation [5]. The lipoma in our case was located on the right ovary. It is also extremely important to distinguish lipoma of the ovary from adipocytic infiltration from the stromal tissues of the ovaries. In the study done by Honore et al., (1979) in 8 cases of the adipocyte infiltration of the ovarian tumor, they were exclusively unilateral, non- capsulated, and were made of closely packed adipose cells [8]. We differentiate our case to be pure lipoma because of the pure encapsulation, lack of connection with the ovarian stroma.

4. Conclusion

The exact mechanism of the origin of the lipoma of the ovary is still not known and is a subject to study. Though the lipoma of the ovary is rare and does not have any serious clinical manifestation in the patient, a differential diagnosis is always important to have appropriate management.

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