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CASE REPORT

BILATERAL IMMATURE OVARIAN TERATOMA

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ABSTRACT: Immature teratoma (IMT) is tumor composed of tissues from ectoderm, mesoderm and endoderm and is considered the second most common germ cell tumor. IMT account for 10-20% of all ovarian neoplasias in women less than 20 years of age, with peak incidence between 15 and 19 years old. IMT rarely occurs during menopause. We herein reporting a rare case in a 3 years old girl with bilateral immature ovarian teratoma which is very rare in bilateralism of tumor as well as the fact that the patient age is below the average for the occurrence of these tumors.
KEYWORDS: bilateral ovarian tumor, immature teratoma, IMT, neoplasm.

INTRODUCTION: Immature teratoma is a tumor composed of tissues from three germ cell layers with immature or embryonic structures. This rare tumor comprise less than 1% of ovarian tumors. Immature teratomas are rarely found bilaterally, while it is common to find benign teratoma in the contralateral ovary.[1] IMT may present as a calcified pelvic masses, abnormal uterine bleeding or pelvic pain. The most common sites of dissemination are the peritoneum and the retro peritoneal lymph nodes. Hematogeneous spreads to lung, liver, or brain is unusual. They present elevated level of alpha-fetoprotein in 50% of cases.[2]

These tumors are histologically graded (1 to 3) based on the amount and degree of neuro epithelial cell component immaturity. Older patient tend to have lower grade tumors than younger patients.[3] Peritoneal implants may be present at the time of surgical procedure, and the prognosis is strongly related to the Histological grade of the tumor and implant (82% survival for patient with grade 1 lesion, 63% for grade 2 lesions and 30% for grade 3 lesions).[4]

CASE HISTORY: A 3 years old girl was presented to us with complaints of on and off pain abdomen and abdominal fullness for last 2 weeks. On examination there was a palpable lump in right lumbar region. Lump was non-tender, firm in consistency. There was no similar history in family. Routine blood investigations were in normal limits including complete blood count, liver function test and renal function test except hemoglobin which was 8.8 gm%.

CECT abdomen finding revealed evidence of two large intra-abdominal enhancing cystic masses with calcification in one of them. Child was subjected to surgery after a detailed informed consent was taken. At laparotomy, there were two ovarian masses noted without ascitis, peritoneal deposits and para aortic lymphadenopathy. Bilateral oophorectomy was performed. The patient had no complication in the post-operative period and was discharged at 4th day. She returned for removal of stitches without incident. The pathological report revealed immature teratomous lesion in both ovary.

DISCUSSION: Germ cell tumors in children are rare. Bilateral immature teratoma is a rare condition, accounting for 10% of cases.[2] Bilateral tumors are most often associated with advanced staging, having a five year survival rate of 80.7% compared with a survival rate of 93% for unilateral tumors.[5]

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They have the ability to be malignant or benign and to metastases. The usual sites of metastasis are the central nervous system, the lymphatic system and the lungs. The main histological classification of germ cell tumors in children is mature teratoma, immature teratoma and malignant germ cell tumor. The types of malignant germ cell tumors are seminoma, dysgerminoma, yolk sac tumor, choriocarcinoma, embryonal carcinoma and mixed germ cell tumors. The different types of germ cell elements that can be present include yolk sac tumor followed by immature teratoma, embryonal carcinoma, dysgerminoma and mature teratoma.

The degree of cell immaturity (Grade 3) is another adverse prognostic factor with high rate of recurrence.[6] These factors justify the radical approach taken to the detriment of the patient reproductive future. The tumor markers, when combined with detection of Ca125, Ca153 and alpha-fetoprotein is helpful for diagnosis of immature ovarian teratoma.[7] Some authors advocate conservative treatment in germ cell tumor grade 1 and 2. Computed tomography and magnatic resonance imaging is useful for diagnostic purpose.

Mature teratoma and immature teratoma both show cystic appearance with fat content but one way to distinguish them would be the presence of contrast.[8] A surgical approach is indicated for diagnosis, treatment and staging. Patient with completely resected tumors have approximately 94% chance of survival at 5 years, while patients with partial resection have a survival expectation of less than 50%. Because bilateralism is rare in this type of tumor, the surgery of choice consist of unilateral salpingo-oophorectomy with collection of samples from peritoneal implants.[9]

Radiotherapy does not appear to improve the prognosis of patients. There is no indication of therapy besides surgery for tumors limited to one ovary (Grade 1), except in cases of capsular rupture or ascitis. In tumors of grade 2 or 3, or with bilateral implants or recurrence, adjuvant chemotherapy should be indicated in a regimen of vincristine, actinomycin and cyclophosphamide (VAC) or bleomycin, etoposide and cisplatin.[10] Early diagnosis associated with immediate therapy and close follow up are associated for long term favorable outcomes.

CONCLUSION: The literature on immature teratoma, particularly bilateral is limited. There are few cases reported. The importance of timely diagnosis in cases of pelvic masses must be emphasized in order to provide early and adequate treatment. It will cause the least possible impact on the reproductive future.

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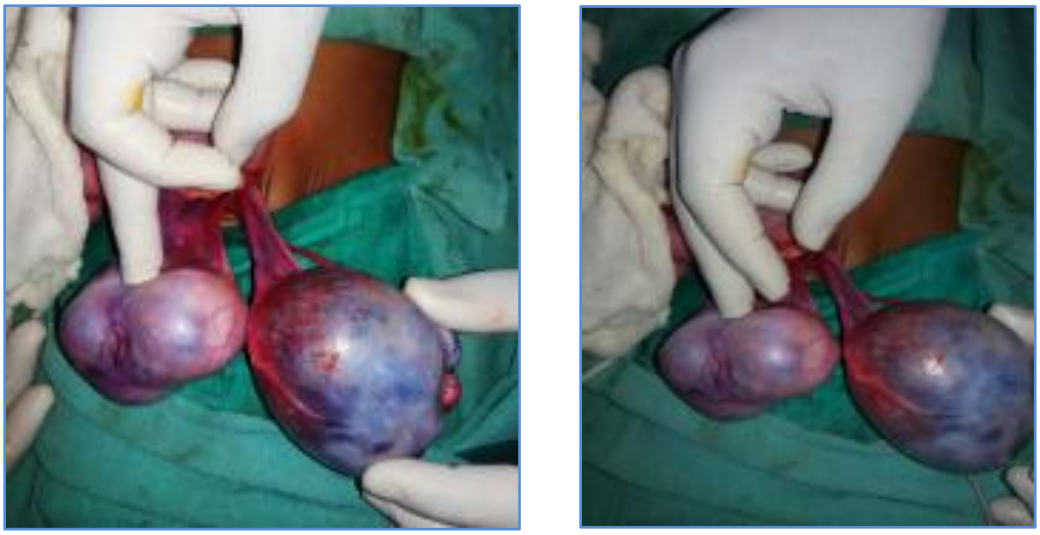

Intra operative photograph of bilateral cystic ovarian masses.

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