



Borderline mucinous cystadenoma ovary a diagnostic dilemma in premenarch - A rare case study from rural India

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ABSTRACT

Ovarian tumors are common neoplasm in women. It accounts for about 5% of all gynecological cancers in India. Borderline Mucinous cystadenoma ovary is extremely rare in children that only few cases are reported. We presented a case of Borderline Mucinous cystadenoma ovary for its rare occurrence in 14 years old girl, presented with symptoms of abdominal distension since last 6 months. Examination showed a single, smooth, cystic mass of 30 weeks pregnant uterus. USG examination showed huge cystic mass arising from right sided ovary. Oophorectomy was performed and send for histopathology examination. Tumor was measures 21x21x7 cm and of 5.2kg weight. Histopathology was diagnostic tool. It was diagnosed as case of Borderline Mucinous cystadenoma ovary. Recurrence was not seen postoperatively. Borderline mucinous cystadenoma have favourable outcome in adloscent girls and salpingo oophorectomy or oophorectomy appear appropriate to preserve fertility.

INTRODUCTION

Ovarian tumors are relatively uncommon in children. Gynaecological malignancies account for about 1-2% of all pediatrics cancers. It has been reported that 40-50% of childhood ovarian masses are non neoplastic. Majority of ovarian neoplasm in children arise from germ cells. WHO classified ovarian tumor into surface epithelial, germ cell, sex cord stromal, miscellaneous and metastatic tumor. Epithelial tumor occur in women between 30-60 yrs.

Epithelial tumor constitute serous, mucinous, endometrioid, Brenner and clear cell type. Mucinous ovarian tumor can be further characterized as benign, borderline and malignant. Borderline mucinous cystadenoma account for 12% of mucinous ovarian neoplasm. The age distribution of patients with these tumor peaks in 5th and 6th decade. Mucinous ovarian tumor are rare in children specially Borderline mucinous cystadenoma ovary that Only few cases of Borderline mucinous cystadenoma ovary are reported under 15 years of age but with best of our knowledge we are only who described Intestinal variant of border line mucinous cystadenoma ovary. We presented a case of Borderline mucinous cystadenoma ovary (intestinal type) in 14 years old adloscent girl for its rare occurrence. Histopathology was the diagnostic tool. Reccurrence rates are nil in premenarch. Salpingo - oophrectomy was the appropriate treatment to save the fertility.

CASE REPORT

A 14 years old adloscent girl presented with complaints of abdominal lump, distension, pain, intermittent retention of urine and constipation since 6 months interrupting the activities of daily life. General condition Fair, thin built, no lymph node palpable. Menstrual history Menstruation not started. Per Abdomen examination Single, smooth, cystic mass measuring 30 weeks pregnant uterus size.

USG examination - A smooth, single, cystic septated tumor arising from right sided ovary.

Clinically it was probably diagnosed as either case of Mature cystic Teratoma or Mucinous cystadenoma.

Right sided oophorectomy was done and send to Histopathology section of Pathology department.

Histopathology Examination : Ovarian tumor was sectioned, processed and at 4u histopathology slides was prepared. They was stained with H&E and PAS stain. Section shows multiloculated areas lined by tall columnar epithelial cells along with presence of mucin in multiloculated areas. cells are having apical mucin, basal nuclei and absence of cilia. Tumor also exhibit gland crowd arranged back to back, cytological atypia, epithelial stratification of mucinous epithelium manifested by intraluminal papillary tufts of various size which lack fibrovascular support. There is also presence of Goblet cells, Picket fence



Figure 1: Right sided ovary measures 21x21x7 cm in size, weight 5.2 kg. Outer surface was smooth, shiny with few congested vessel on outer surface.



Figure 2: Cut/ surface Multiloculated cysts present filled with transparent mucinous fluid and wall thickness varying from papery thin to 0.5cm.

appearance epithelium ensuring Intestinal type of Borderline Mucinous ovary.

Hand E stain section showing multiloculated areas lined with tall columnar epithelium with presence of mucin in multiloculated areas.

PAS stain section showing gland crowd, stratification, intraluminal papillary tufts without fibrovascular support.

DISCUSSION

Tumors of ovary are common forms of neoplasia in women. Ovarian cancer account for 6% of all cancers in female and is 5th most common form of cancer in women in the united states[1].

In India ovarian cancers accounts for about 5% of all gynaecological cancers[2].

Ovarian neoplasm is classified into following groups Surface epithelial tumor, Sex cord tumor, Germ cell tumor and metastatic[1].

Surface epithelial tumor are frequent constituting 65-70% and are found in female above 20 years of age group. It is well known that Germ cell tumors are the commonest ovarian neoplasm in the first two decade of life. Ovarian tumors are relatively uncommon in children. Norris and Jehsen found that less than 1% of epithelial carcinoma occurs below the 20 years of age[3]. Gynaecological malignancies account for about 1-2% of all pediatric cancer and roughly 60-70% are ovarian in origin[4]. Mucinous tumors a forms of surface epithelial ovarian tumors, occur principally in middle adult life and rare before puberty and after menopause and occur in about 25% of all ovarian neoplasm. Mucinous tumor are divided into benign, border line and malignant whereas Borderline is further divided into Intestinal and endocervical type[5].

Borderline mucinous tumors Intestinal (GIT) type comprise about 38% of borderline tumor and 12% of mucinous ovarian neoplasm[6]. The age distribution of patients with these tumors peaks in the 5th and 6th decades[7]. Mucinous ovarian tumor specially Borderline (GIT) type is extremely rare in children. In

present study 14 years old adloscent girl presented with abdominal lump, distension, pain, retention of urine, constipation similar sign and symptoms were seen in study done by Horiuchi, Gavandi PS[8,9]. Radiologically it was single, smooth, septated tumor arising from right sided ovary. Probably diagnosed as either Mature cystic Teratoma (Germ cell tumor) or Mucinous cystadenoma. More emphasis was on Teratoma because Mature cystic teratoma constitute the most common ovarian tumor in childhood. They are unilateral in 88% of case, provoke only symptoms relating to the mass[10] and are multiloculated[5].

In the present study ovarian tumor was unilateral, arising from right sided measuring 21x21x7cm and 5.2kg wt. Ovarian tumor was arising from right side and unilateral. Mucinous tumors are unilateral but can be bilateral in 10-20% of the case[5]. Outer surface was smooth, glistening c/s showed multiloculated areas filled with mucin similar with[2,5,8,9]. These slides was stained with HSE and PAS which on microscopic examination showed multiloculated areas lined with tall columnar epithelium. Cells are having apical mucin, basal nuclei, absence of cilia. Tumor also exhibit gland crowd, epithelial stratification, cytological atypia, intraluminal papillary tufts of various size which lack fibrovascular core support [6]. Stromal invasion was absent signifying its Border line nature. There was also Goblet cells, picket fence epithelium ensuring Intestinal (GIT) variant of Borderline Mucinous cystadenoma[5]. Surgical treatment of borderline ovarian tumor resembles that of ovarian cancer which include total hysterectomy, bilateral salpingo-oophorectomy for those who have completed their families or say who do not want to get pregnant any more. But fertility is an important issue in premenarche. Fertility sparing surgeries include Salpingo oophorectomy, oophorectomy & cystectomy. Cystectomy has been associated with higher recurrence rate than others. Salpingo oophorectomy or oophorectomy has thus been recommended as fertility sparing surgery. In review with other borderline mucinous tumor among premenarch salpino-oophorectomy, oophorectomy was done⁸. Salpino-oophorectomy or oophorectmy is appropriate in premenarch in borderline ovary tumor as recurrence rates are nil so as to preserve fertility.

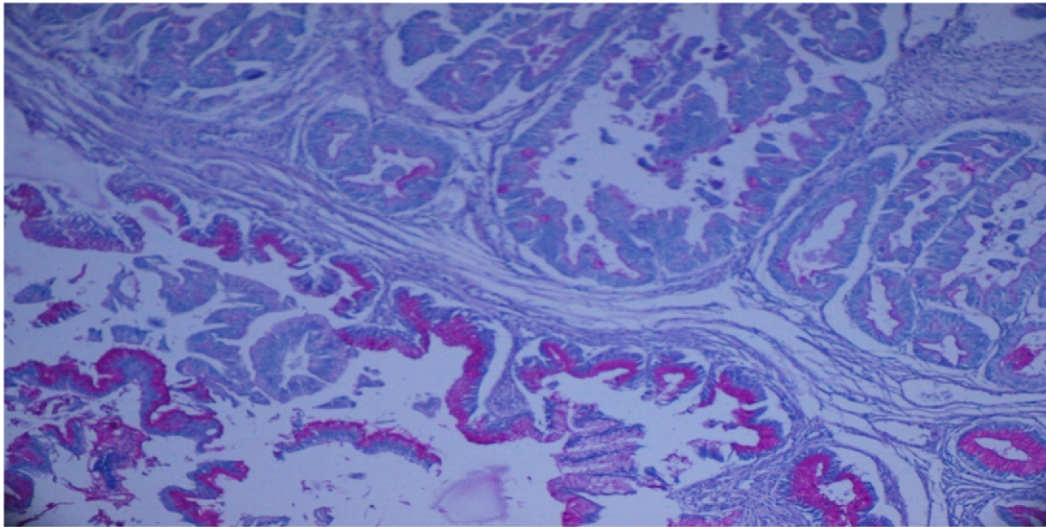


Figure 3: PAS stained multiloculated areas separated with fibrous septa. There is also nuclear atypia, stratification and presence of rounded PAS positive goblet cell.

CONCLUSION

If a adolescent girl present with ovarian tumor along with clinical sign and symptoms possibility of Borderline Mucinous cystadenoma (intestinal type) must be kept in mind ,though Borderline Mucinous cystadenoma ovary (intestinal type) is very rare in this age group. Histopathological examination was diagnostic tool. Salpingo -oophrectomy, oophrectomy is appropriate surgical treatment in premenarche with borderline mucinous cystadenoma ovary so as to preserve fertility as recurrence rates are nil in premenarche. However clinician should be alert regarding the recurrence during followup.

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