Management Protocol of Ovarian Masses in Adolescence

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Introduction
Ovarian Neoplasm’s account for Approximately 1% of all tumour in adolescent. Most ovarian Neoplasm’s are Benign. However it is important to establish an early diagnosis to reduce the risks of ovarian torsion and to improve the prognosis for the malignant lesion. Ovarian Neoplasm’s are Aprox. 10 – 20% of all ovarian masses during adolescence are malignant. Elevated levels of serum tumour marker, including α fetoprotein, β HCG, CA-125 Raise concern for ovarian Malignancy.

- Ovarian Masses are the most frequent gynaecology pathology seen in adolescent girls. Functional or organic tumours of the ovary are usually benign and the incidence rises with age.
- Most cyst are functional and adenexal torsion is the main complication, But a malignant etiology must nevertheless always the eliminated.
- When Malignancy is identified, the children’s oncology Group (COG) currently has several recommendations:
  1. Intact removal of the tumour without violation in situ.
  2. Sparing of the fallopian tube if not adherent.

- Obtaining ascites for cytology.
- Examination and palpation of the omentum, with biopsy or removal of suspicious areas.
- Examination & palpation of the iliac and artocaval nodes, with biopsy of abnormal areas.

Identification of Imaging futures at USG, CT Scan and MRI can help to differentiate benign from Malignant and plays a crucial Role in determine treatment option.

Aims and Objective
To discuss the Management protocol of ovarian masses in adolescence.

Material and Methods
Study Design: Hospital Based Prospective, case-control study.
Study Place: Katihar Medical College, Katihar Obs & Gynaec Department
Study Period: 2nd Jan 2018 to 2nd Jan 2019
Study Population: To prospectively review the clinicopathologic pattern and outcome of 20 patient with Adolescent ovarian tumours in KMCH.
All cases of ovarian masses reporting to the gynaecology Department of KMCH out of 20, 15 were managed surgically.

Data was recorded, Registration Number, Clinical Presentation, Age, Size, B/L, Histopathology. Staging if tumour was found malignant sites and extra ovarian involvement. All patients were kept in follow up.

Result

- Majority of patient fell in the such group 14 – 16 years of age.
- Clinical presentation in the majority was mass abdomen & abdominal distension.
- Approach was open laprotomy in all cases
- Histopathology was benign in 16 cases and malignant in 4 cases.
- There were 5 cases of dermoid, one Malignant and one Benign. All 4 malignancies were found to be non-epithelial on histopathology.

Table 1 Serologic Tomour Markers and Associated ovarian Tumours

<table>
<thead>
<tr>
<th>Tumour Marker</th>
<th>Associated Ovarian Tumour</th>
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<tbody>
<tr>
<td>AFP</td>
<td>Yolk sac Tumour, Immature teratoma, Embryonal Carcinoma, Stertoli-Leydig cell tumour</td>
</tr>
<tr>
<td>β HCG</td>
<td>Choriocarcinoma, Embryonal carcinoma, Dysgerminoma</td>
</tr>
<tr>
<td>LDH</td>
<td>Dysgerminoma</td>
</tr>
<tr>
<td>CA – 125</td>
<td>Epithelial tumour</td>
</tr>
<tr>
<td>Inhibin</td>
<td>Granulosa cell tumor</td>
</tr>
</tbody>
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Note: AFP = α- fetoprotein, β - hCG = beta subunit of human chorionic gonadotropin, LDH= lactic dehydrogenase.

Table 2 Classification and Comparative Frequency of Ovarian Tumors in Children and Adolescence

<table>
<thead>
<tr>
<th>Classification</th>
<th>Comparative Frequency</th>
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<tbody>
<tr>
<td>GCT</td>
<td>60% - 80%</td>
</tr>
<tr>
<td>Epithelial stromal tumor</td>
<td>15% - 20%</td>
</tr>
<tr>
<td>SCST</td>
<td>10% - 20%</td>
</tr>
<tr>
<td>Miscellaneous tumors</td>
<td>&lt;5%</td>
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Conclusion

- Adolescents benefit from conservative management of ovarian cyst due to fact that majority are Benign.
- If surgical Intervention is necessary the goal should be preservation of ovarian tissue in order to allow normal pubertal development & preserve fertility.
- Young Patient desirous of fertility
  - Ophorectomy procedure of choice
  - Ovarian cyeectomy
  - Ovariectomy
- The study shows the preponderance of non-epithelial tumour and high percentage of malignant germ cell tumour.

Bibliography

3. Merino MJ, Jaffe G Age Contravast in ovarian Pathology Cancer 1993; 71(Suppl); 537-544