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Management Protocol of Ovarian Masses in Adolescence

Authors
Dr Rashmi Sinha[1], Dr Rashmi Verma[2], Dr Prachi[3]
[1]PGT 3rd Year, Dept. of Obstetrics & Gynaecology, KMCH
Associate Prof., Dept. of Obstetrics & Gynaecology, KMCH
[3]PGT 3rd year, Dept. of Obstetrics & Gynaecology, KMCH

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.
    3. Obtaining ascites for cytology.
    4. Examination and palpation of the omentum, with biopsy or removal of suspicious areas.
    5. 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 & Gynae 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

Tumour Marker	Associated Ovarian Tumour
AFP	Yolk sac Tumour Immature teratoma Embryonal Carcinoma Stertoli-Leydig cell tumour
β HCG	Choriocarcinoma Embryonal carcinoma Dysgerminoma
LDH	Dysgerminoma
CA – 125	Epithelial tumour
Inhibin	Granulosa cell tumor
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

Classification	Comparative Frequency
GCT	60% - 80%
Epithelial stromal tumor	15% - 20%
SCST	10% - 20%
Miscellaneous tumors	<5%

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 cyctectomy
  - Ovariotomy
- The study shows the preponderance of non-epithelial tumour and high percentage of malignant germ cell tumour.

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