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KEY WORDS: Teratomas; Immature; Cystic; Abdominal Masses; Ultrasound; Histopathological Examination; Laparoscopy

EVALUATION OF OVARIAN TERATOMAS IN YOUNG FEMALES :A CLINICAL AND HISTOPATHOLOGICAL ANALYSIS:ONE YEAR RETROSPECTIVE STUDY AT RIMS

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ABSTRACT

It is challenging for the clinicians to make a pre-operative diagnosis of Teratomas, especially, if it is a case of immature cystic teratoma. We diagnosed women of age groups 0-20 yrs, 20-40 yrs, 40-60 yrs, >60 yrs,who presented with abdominal masses, which were diagnosed by abdominal Ultrasound as Teratomas, the types of which were best described after a proper Histopathological examination in the Department of Pathology at RIMS. The aims of the current study were to analyse the clinical features of Ovarian teratomas and to discuss it's management. Women requiring surgery for Ovarian Teratomas should be appropriately counselled about the risks and benefits of laparoscopic and open approaches.

INTRODUCTION

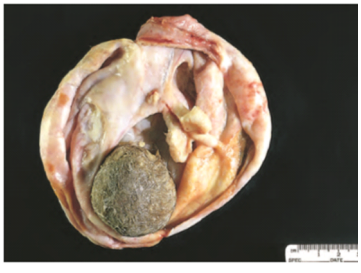
Teratoma is the most common Germ cell Tumour of Ovary constituting about 20 percent of all Ovarian neoplasms.1It is usually unilateral, and bilateral in 10-15% of cases.2Mature Teratomas are usually benign, but in 0.1-0.2% of cases ,it may undergo malignant transformation.3Teratomas are classified as either mature or immature types and are often composed of multiple embryologic layers.While the mature type is benign, the immature type is benign with a more aggressive course.4 Definitive diagnosis will be made at the time of surgical excision.5About 1% of the Dermoids undergo malignant transformation, most commonly to Squamous cell carcinoma, but also to other cancers as well (e.g., thyroid carcinoma, melanoma).6There is a rare group of Tumours amongst Teratomas known as Monodermal or Specialised Teratomas, the most common of which are Struma Ovarii and Carcinoid.6Mature Teratomas consist of tissues derived from all the three Germ layers, while Immature Teratomas comprise of mainly immature or Embryonal structures.

AIMS AND OBJECTIVES

To evaluate our experience with Histopathology to characterise the detailed features of Ovarian Teratomas.

MATERIALS AND METHODS:

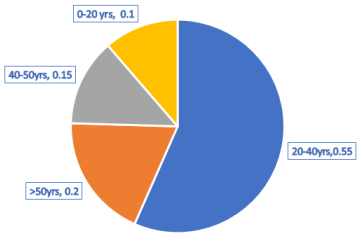
The case studies were carried out at Rajendra Institute of Medical Sciences, R.I.M.S, Ranchi from 1st June 2019 to 15th June 2020. It was a Hospital based Cross sectional study. The cases were operated in the Department of surgery of R.I.M.S and the specimen were sent to the Department of Pathology of the Institute itself. The specimen were grossed, followed by the preparation of paraffin blocks, followed by preparation of slides and their staining With H&E stain. The above were then examined under high power Microscope for examining the structural details of Ovarian Teratomas and were included for analysis during this study period.



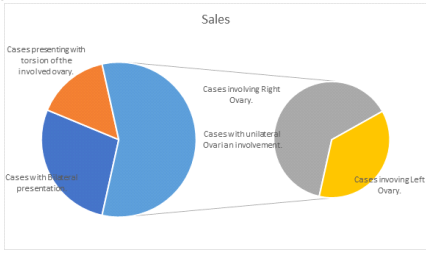
RESULTS

Total number of cases found during this 1 year study period was 15. The incidence of Ovarian Teratoma was found to be more common amongst the age group extending from 5-60 years. The majority comprised of younger age group i.e. 20-40 years.The mean age of presentation is 31.5 years.

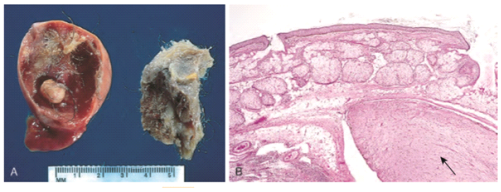
TYPES	No. of cases
PURE MATURE CYSTIC TERATOMA (MCT)	10
IMMATURE TERATOMA	3
MCT with Mixed GCT	0
MCT with Mucinous Tumour	1
MCT with Malignant Transformation	1



The above chart clearly demonstrates that Mature Cystic Teratoma is the most common ovarian tumour in young females.



The above representation demonstrates that amongst the cases of Ovarian Teratomas studied at our Institution, about 60% were Unilateral, 30% were Bilateral and 10% presented with torsion.



My 1 year retrospective study showed that a cystic Teratoma surface was lined with mature Squamous epithelium with cornifying materials and hairs. Sebaceous glands, sweat glands ,hair

DISCUSSION

Here in the study ,we found that the age distribution was wide ranging from 2yrs to 62yrs and most common age group is 20-40yrs.1The incidence of mature cystic teratoma is 20-25% of all Ovarian tumours. It is usually unilateral, and bilateral in small percentage of patients.2A study of yielded teratomas tissues reported components of different tissues characteristics .For example ,a study by Shi et al, found that a cystic ovarian teratoma surface was lined with mature squamous epithelium with cornifying material and hairs. Sebaceous glands, sweat glands, hair follicles, and fat tissue were also present.3 A case of Urinary retention due to Dermoid cyst in a 20 month old infant girl has been reported by Matsumoto et al.3The infant had a chief complaint of voiding difficult and micturition pain. Excretory urogram , ultrasound, and computed tomography scan revealed a retrovesical mass which compressed the urinary bladder anteriosuperiorly .On operation, they found that the tumour originated from the right ovary and was 6.2cm x 5.0cm x5.0 cm in size, and the pathological diagnosis of the mass was ovarian dermoid cyst.4 Stage I tumours, however, particularly those with low-grade(grade 1) histology, have an excellent prognosis.[6]

CONCLUSION

The above retrospective study provides the relevance of proper grossing and further knowledge in depth into the wide variety of histological patterns this tumour can present with .Long term follow up of these patients are required because of the higher recurrences in future. The clinical presentation of patients with Ovarian teratoma includes complications like torsion, haemorrhage, or infection. The rate of malignant transformation is extremely rare in this condition except for extremes of ages.

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