



ASSESSMENT OF HISTOPATHOLOGICAL PATTERNS OF FALLOPIAN TUBE LESIONS AT TERTIARY CARE HOSPITAL, BHAVNAGAR.

Pathology

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ABSTRACT

Introduction: The fallopian tubes are affected by a wide spectrum of diseases ranging from salpingitis to carcinoma. The knowledge of these variations in pathology of the tube can be a great information to the pathologist who identifies a potentially unusual histologic finding and aids the gynecologist in the management of these lesions. **Material and method:** This prospective study was carried out in the Department of Pathology, Govt. Medical college, Bhavnagar from July 2021 to June 2022. All consecutive samples of fallopian tube were included in this study and sample that were not fixed properly or autolyzed were excluded. Each fallopian tube was sectioned, processed and stained with H&E stain using standard histological technique. Microscopic features were assessed by the PG guide of this study. **Result:** Out of 263 cases 77.6% of cases had normal histology. 21% showed non inflammatory lesion and 1.5% cases showed inflammatory lesion. Among non-inflammatory lesions, ectopic pregnancy and among inflammatory lesion acute salpingitis was most common. hydrosalpinx & hematosalpinx in 5.7% cases and paratubal cysts & Walthard nests were seen in 4.2% cases. Malignant lesion was not found in this study. 48.7% were in age group of 21-30 years as large number of tubectomy specimen received. **Conclusion:** Highest proportion of pathological lesions in fallopian tubes was: Ectopic pregnancy seen in 11% cases.

KEYWORDS

Ectopic pregnancy, Fallopian tube, Hydrosalpinx, Paratubal cyst, Walthard cell nests

INTRODUCTION:

The fallopian tubes are affected by a wide spectrum of diseases ranging from salpingitis to carcinoma. Concept of fallopian tube epithelium as a main source for tubal, ovarian and pelvic carcinoma has become clearly evident.

Hence proper examination of fallopian tube is essential.⁽¹⁾ Hence this study was done to finding the percentage of premalignant lesions in fallopian tube and also to find the percentage of different pathologies with respect to different age groups and evaluate the spectrum of lesions associated with benign and malignant fallopian tube diseases.⁽²⁾

MATERIALS AND METHODS:

This was retrospective study carried out in the Department of Pathology, Govt. Medical college, Bhavnagar over a period of one year from July 2021 to June 2022 after institutional ethics committee approval.

All consecutive properly fixed non autolysed fallopian tube specimen received at histopathology section during study period were studied using standard histopathological methods. All the slides were viewed by a single senior pathologist.

RESULTS AND ANALYSIS:

263 cases of fallopian tubes were received. No specimen was autolyzed or rejected for exclusion from this study.

The age of patients varied from 20 years to 72 years. Majority of the patients 48% were in the age group of 21-30 years.

Majority of cases were of bilateral salpingectomy (51%) followed by hysterectomy with bilateral salpingo-oophorectomy (25.5%) cases. Hysterectomy with right salpingo-oophorectomy was seen in 20% cases. Bilateral fallopian tubes were received in 51% and of unilateral fallopian tubes in 4%.

Majority of cases had normal fallopian tube morphology as a large number of specimens were received from tubal ligation. Premalignant or Malignant lesion was not found in this study.

Table 1: Age wise distribution of histopathological diagnosis

Age group	11-20	21-30	31-40	41-50	51-60	61-70	71-80	Total
Diagnosis								%
Normal	5	105	34	51	07	01	01	77.6%

Acute salpingitis (Figure-1A)	-	01	-	01	-	-	-	0.7%
Chronic salpingitis (Figure-1B)	-	01	-	-	-	-	-	0.4%
Tuberculous salpingitis (Figure-2A, 2B)	-	-	01	-	-	-	-	0.4%
Paratubal cyst	-	-	04	05	-	01	-	3.8%
Hydrosalpinx	-	-	04	07	02	-	-	4.9%
Hematosalpinx	-	-	-	02	-	-	-	0.8%
Ectopic pregnancy (Figure-3A, 3B)	01	21	07	-	-	-	-	11%
Walthard cell nests	-	-	-	01	-	-	-	0.4%

Table 1 shows 77.6% were normal tubes. Common pathologies noted were ectopic pregnancy in 11%, hydrosalpinx in 4.9%, paratubal cyst in 3.8%.

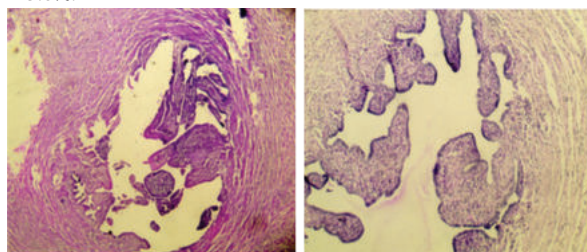


Figure 1: A. Acute salpingitis – Plicae shows abundant neutrophilic infiltrate [10x H&E] **B.** Chronic salpingitis – Fuse plicae shows inflammatory infiltrate consisting of plasma cells and lymphocytes [4x H&E]

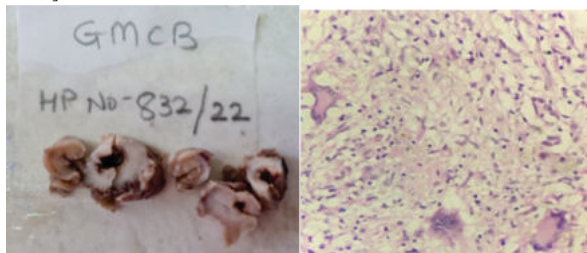


Figure 2: A. Tuberculous salpingitis - Gross **B.** Tuberculous

salpingitis – Poorly formed granuloma shows epithelioid cells giant cells & lymphocytes [40x H&E]

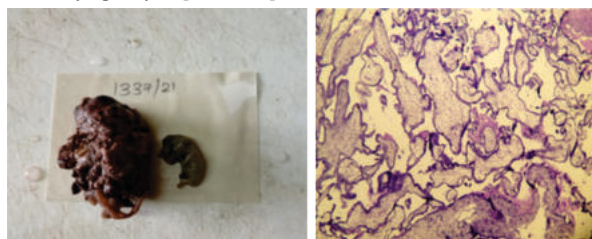


Figure 3: A. Ectopic pregnancy - gross **B.** Ectopic pregnancy - Chorionic villi in fallopian tube (Arrow)[4x H&E]

Abnormal fallopian tube morphology in the form of abnormal muscle architecture and vessel wall thickening and vessel wall abnormalities were seen in ectopic pregnancy in addition to presence of hemorrhage, chorionic villi and trophoblastic cells.

DISCUSSION:

Fallopian tubes in majority of the cases of this study were removed as a part of hysterectomy specimens with bilateral salpingo-oophorectomy or with unilateral salpingectomy and unilateral salpingo-oophorectomy. They were also received as tubal ligation specimens.

In present study, the age of patients varied from 20 years to 72 years with maximum patients 48.7% in the age group of 21-30 years as most of the tubes in this age were of tubal ligation and ectopic pregnancy. Similar to this, study conducted by Kukreja et al. and Choudhry et al. also had maximum cases in this age group with 42.5% and 50% respectively. Most case of Choudhry et al. in this age group were of ectopic tubal pregnancy. Among the mass lesions benign tubo-ovarian pathologies were more common than malignant neoplasms. Tubo-ovarian masses appear to increase with age.⁽³⁾

Majority of the fallopian tubes in present study were normal (77.6%) which is in concordance with other studies conducted by Choudhry et al. and Arora et al. Normal fallopian tubes are seen in large number in present study because being the government setup a greater number of patients visited for tubectomy.

Table no. 3: Comparison of histopathological diagnosis with other studies:

Histopathological Diagnosis	Present Study	Choudhry et al. (4)	Kujur et al. (5)	Arora et al. (3)
Normal	77.6%	64%	36.2%	58.1%
Inflammatory				
Acute salpingitis	0.7%	0.8%	29.7%	12.9%
Chronic salpingitis	0.4%	17.4%	2.7%	4.8%
Tuberculous salpingitis	0.4%	0.8%	0.5%	0.9%
Non-Inflammatory				
Paratubal cyst	3.8%	4.80%	11.4%	-
Hydrosalpinx	4.9%	-	1.6%	6.4%
Hematosalpinx	0.8%	1.2%	1.1%	0.6%
Ectopic pregnancy	11%	12%	10.3%	2.9%
Walthard cell nests	0.4%	-	-	-

In present study both acute and chronic salpingitis were less than 1% compared to 13-30 % in the other three studies. This suggests better female gynecological health in area of this study.

Ectopic pregnancy was seen in 11% in present study, similar to Choudhry et al. and Kujur et al. While, Arora et al. noted very few cases of ectopic pregnancy although they had acute salpingitis in 13% cases and it would be expected that this reflects the percentage of salpingitis in their region increasing chances of ectopic pregnancy.

Hydrosalpinx was found more in comparison to hematosalpinx in present study i.e., 4.9% and 0.8%. Though more cases of hematosalpinx should be expected as per results of other studies, it appears incidence of hematosalpinx is very less or they have got incorporated in the ectopic cases itself. The hydrosalpinx could be due to tubal infections.

It is important to see for previous scarring either due to surgery,

inflammation in tube, PID, endometriosis, and persistent inflammation in tube as all can cause ectopic tubal pregnancies. Persistent inflammation acute, chronic or tuberculous can cause a repeat episode of ectopic pregnancy. Hence this should be conveyed in the histopathology report.

Many a times it is difficult to trace chorionic villi or trophoblastic cells in masses received as suspected ectopic specimens. In such cases tubal muscle abnormalities and thickened tubal blood vessels, other vessels wall abnormalities should prompt the pathologist to continue looking for presence of ectopic tissue.

None of the fallopian tube showed hyperplasia of epithelium or premalignant changes. This is in concordance to the very less number of ovarian epithelial malignancies appearing over past 2 years

CONCLUSION:

Proportion of pathological lesions in fallopian tubes was : Ectopic pregnancy in 11% cases, inflammation in 1.5% cases, hydrosalpinx & hematosalpinx in 5.7% cases and paratubal cysts & Walthard nests in 4.2% cases.

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