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HISTOPATHOLOGICAL STUDY OF SPECTRUM OF LESIONS IN THE FALLOPIAN TUBES

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ABSTRACT: The spectrum of lesions encountered in the fallopian tube, their age wise incidence and histopathology are studied. Eight hundred and forty cases where fallopian tubes were removed either separately as salpingectomy specimens or along with hysterectomy or as salpingo-oophorectomy specimens were analysed and their histopathological findings were documented. Majority of tubal specimens were normal. There is significant number of chronic nonspecific salpingitis cases. The rare cases in our study are actinomycosis and primary adenocarcinoma.

KEYWORDS: Fallopian tube, salpingitis, ectopic pregnancy, actinomycosis, adenocarcinoma.

INTRODUCTION: Fallopian tubes are complex structures that connect ovaries to endometrial cavity. They are sites of various interactions necessary for normal pregnancy.⁽¹⁾ The significance of pathogenetic changes in fallopian tubes have vital effect on fertility. Salpingitis is responsible for many cases of secondary infertility. In some developing countries ectopic pregnancies are leading cause of maternal deaths. Tubo-ovarian masses constitute a significant component of female genital tract pathology.⁽²⁾ Though rare, tubal neoplasms may be life threatening.

MATERIALS AND METHODS: This is a two years study performed in the Department of Pathology from July 2012 to June 2014. The fallopian tubes obtained either by salpingectomy, salpingoophorectomy or by hysterectomy were analysed. All the specimens were formalin fixed, processed, Haematoxylin and Eosin stained slides were studied and analysed.

RESULTS: Over a period of two years, a total of 840 fallopian tubes were studied. Majority of the specimens were received as total abdominal hysterectomy specimens accounting to 54.52%. This is followed by tubectomy specimens consisting of 42.85 %. Tubo-ovarian masses are the least making 2.62%.

SPECIMENS RECEIVED ACCORDING TO CLINICAL DIAGNOSES:

Clinical diagnosis	No. of cases	Incidence %
TAH specimens		
DUB	24	2.86
Fibroid	56	6.67
Ectopic pregnancy	58	6.90
Chronic cervicitis	66	7.86
Prolapsed of uterus	28	3.33
Carcinoma cervix	46	5.48

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Others	180	21.42
Tuboovarian mass	22	2.62
Tubectomy for sterilization	360	42.86
Total	840	100.00

Table – I

Out of 840 fallopian tubes analysed, pathology was noted in 30.33% of the cases and remaining cases were unremarkable. Salpingitis constituted the major tubal lesion with an incidence of 14.76%. Most of these cases presented with symptom of pain abdomen or abnormal uterine bleeding. Exudates were noted in cases of acute salpingitis while chronic salpingitis showed fibrous adhesions.

Ectopic tubal gestation constituted 6.90% (58/840). Among them four cases had intrauterine contraceptive device and one case was treated for genital tuberculosis.

We received two rare cases in our study. Tubo ovarian actinomycosis a very rare lesion was noted in a 35 yrs old woman. Diagnosis was confirmed by microscopic examination of the tissue. The other extremely rare case is primary adenocarcinoma of tube. This was diagnosed in a 55 years old post-menopausal patient presenting with abdominal pain and uterine bleeding. Grossly the tube was enlarged with gray white mass extending from one side of the wall. Histologically, the tumor was moderately differentiated adenocarcinoma. Here the neoplasm did not extend beyond the tube.

DISTRIBUTION OF VARIOUS TUBAL LESIONS IN PRESENT STUDY:

Sl. No.	Fallopian Tube Morphology	No. of cases	Incidence %
1	Normal	585	69.67
2	Abnormal	255	30.33
1	Salpingitis	124	14.76
	Acute	32	3.81
	Chronic	83	9.87
	Tuberculosis	5	0.59
	Suture granuloma	4	0.48
2	Hydrosalpinx	56	6.65
3	Salpingitis Isthmica Nodosa	4	0.48
4	Ectopic pregnancy	58	6.90
5	Endometriosis	3	0.36
6	Paratubal cysts	6	0.71
7	Walthard cell nests	2	0.24
8	Actinomycosis	1	0.12
9	Primary Tubal Adenocarcinoma	1	0.12

Table – II

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AGE WISE DISTRIBUTION OF TUBAL LESIONS:

Sl. No.	Tubal Lesions	20-25	26-30	31-35	36-40	41-45	46-50	> 50	Total	%
1.	Acute salpingitis	-	17	15	-	-	-	-	32	3.81
2.	Chronic salpingitis	-	35	29	10	5	4	-	83	9.87
3.	TB salpingitis	-	2	3	-	-	-	-	5	0.59
4.	Suture granuloma	-	2	1	1	-	-	-	4	0.48
5.	Hydrosalpinx	-	29	15	12	-	-	-	56	6.65
6.	Salpingitis isthmica Nodosa	2	2	-	-	-	-	-	4	0.48
7.	Ectopic pregnancy	14	28	16	-	-	-	-	58	6.90
8.	Endometriosis	-	2	1	-	-	-	-	3	0.36
9.	Paratubal cysts	-	1	3	2	-	-	-	6	0.71
10.	Walthard cell nests	-	-	2	-	-	-	-	2	0.24
11.	Actinomycosis	-	-	1	-	-	-	-	1	0.12
12.	Adenocarcinoma	-	-	-	-	-	-	1	1	0.12

Table III

Tuberculosis- Granulomas formed of lymphocytes, epithelioid cells and Langhans giant cells

Ectopic tubal pregnancy

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Ectopic pregnancy-Chorionic villi and decidual tissue

Endometriosis – Endometrial glands and stroma embedded in tubal wall

Tubal Adenocarcinoma

H & E Stain

Actinomycosis- H & E Stain

Actinomycosis – Fungal filaments with surrounding dense inflammatory cell collections

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Adenocarcinoma – Neoplastic cells are round to oval with pleomorphic nuclei, scanty cytoplasm, arranged in papillary pattern

DISCUSSION: In the present study 840 specimens were analysed carefully. Most of the cases presented with vaginal bleeding or lower abdominal pain. Tubal pathology was noted in 30.33% of the cases and salpingitis is the commonest lesion (14.76%). These findings are similar to the study of Bhagwan et al.⁽³⁾ In some cases salpingitis was noted as incidental finding without any clinical symptoms.⁽⁴⁾

Tuberculous salpingitis was seen in 5 cases. Associated secondary infertility was noted in a case which was probably due to tubal occlusion due to the granulomatous inflammation.⁽⁵⁾

Tubal ectopic pregnancies constituted 6.90% of the cases. Intrauterine contraceptive device could be the predisposing cause in four cases.⁽⁶⁾ A few cases had other inflammatory pathologies.

Hydrosalpinx was seen in 55 cases. In most of the cases it was seen unilaterally.

Other rare encounter in our study is a case of tuboovarian actinomyces in a 35 years old women suffering from lower abdominal pain and purulent vaginal discharge. This patient had retained intrauterine contraceptive device which might be the possible predisposing cause.⁽⁷⁾ Increasing rate of infection is seen with plastic intrauterine contraceptive devices.⁽⁸⁾ If untreated, it may lead to death.⁽⁹⁾ Histopathological examination of the infected organ plays a vital role in the diagnosis, treatment and prevention of the complications.

The primary fallopian tube carcinoma is an extremely rare malignancy. They account for 0.14 - 1.8% of all genital malignancies.⁽¹⁰⁾ Annual incidence is about 3.6 per million women.⁽¹¹⁾

In our study a single case was noted accounting for 0.12% of all the specimens. The patient was a post-menopausal woman presenting with lower abdominal pain and serosanguinous vaginal discharge.

CONCLUSION: In the present study, though the majority of tubal specimens were normal, there were a significant number of salpingitis cases. Carefully histopathological examination of all the tubal specimens in day to day practice and treating the lesion if present is crucial in the management of post-operative period in gynecological surgeries. This also helps in the prevention of further complications.

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