



A STUDY ON HISTOPATHOLOGICAL CHANGES IN SALPINGITIS, HYDROSALPINX AND TUBAL PREGNANCY

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Abstract

Fallopian tubes are complex structures, they represent more than conduit from ovary to endometrial cavity. They are the seats for a variety of interactions in a normally implanted pregnancy. The significance of pathogenic changes in fallopian tubes is related to infertility. Salpingitis is responsible for secondary occlusion or stenosis. The prospective study was done from June 2010 to June 2012. A total number of cases were analysed. The results obtained were subjected to analysis using Microsoft Excel spreadsheet and SPSS for statistical significance. The commonest tubal lesion is salpingitis (66). Tubal ectopic pregnancy was the second commonest condition noticed (55). The third common lesion was Hydrosalpinx

Keywords: Fallopian tubes, Infertility, Salpingitis, Kurnool

Introduction

Acute salpingitis is associated with congestion and chronic salpingitis with fibrous adhesions.¹ The complication of salpingitis is the hydrosalpinx which causes the mucosal damage and causes infertility. The tuberculous salpingitis is the most common cause of occlusion and stenosis. World wide, ectopic gestation is the cause for high incidence of maternal deaths. In ectopic pregnancies, tubal rupture is common and unnoticed.²

The primary tumors of fallopian tubes are rare but the lesions can occur in postmenopausal women with non-specific symptoms. The metastasis to the tube is common than the primary tumors. The usual metastasis is from ovary, endometrium and cervix.³

It is a common surgical specimen in pathology laboratory and may be examined either as salpingectomy or tubal ligation specimen or a part of hysterectomy and or oophorectomy specimen.³ There is lack of data to describe the frequency of various histological findings in a general surgical pathology.¹ The present study is undertaken in view of the disease sequelae of tubal infection, as tubal stenosis, occlusion, (granulomatous), infertility and ectopic.

Objectives:

To study the histopathological changes in Salpingitis, Hydrosalpinx and Tubal pregnancy.

MATERIALS AND METHODS

The present study for a period of 2 years from JUNE 2010 to JUNE 2012 was done in the department of Pathology, Kurnool Medical College, Kurnool. During the above period fallopian tubes obtained either by tubectomy and by hysterectomy was analysed. An analysis of cases of various lesions of fallopian tubes during the above period was done. H&E stained sections of these 780 cases were reviewed and the lesions were tabulated.

The prospective study was done from June 2010 to June 2012. A total number of cases were analysed. All specimen were fixed in 10% formalin. After gross examination, the sections at various levels were given. Specimen of suspected ectopic pregnancy were also examined for the presence of embryo, placenta, haemorrhages and rupture of fallopian tube. Paraffin tissue blocks were made, the sections were stained with the Haematoxylin and Eosin. The lesions were analysed. The results obtained were subjected to analysis using Microsoft Excel spreadsheet and SPSS for statistical significance.

RESULTS:

From June 2010 to June 2012 surgical pathology specimen were received in the department of Pathology, Kurnool Medical College, Kurnool. A total number of 780 fallopian tubal lesions giving a percentage of 10.26% among total surgical pathology specimen.

In the total number of 780 cases of fallopian tubal lesions, 596 cases were normal. The commonest lesion noted was Salpingitis (66 cases) giving a percentage of 8.5% among the total number of fallopian tubal lesions. The next common condition noticed was Ectopic pregnancy (55 cases) giving a percentage of 7.05%. The third common tubal lesion noticed was Hydrosalpinx (52 case) giving a percentage of 6.7%.

Table 1: Distribution of various tubal lesions encountered in the present study

Sr. No.	TUBAL MORPHOLOGY	NO. OF CASES	INCIDENCE %
A	Normal	596	76.41
B	Abnormal	184	23.58
1	SALPINGITIS	66	8.46
	Acute	18	2.30
	Chronic	40	5.12
	Tuberculosis	4	0.51
	Suture Granulomas	4	0.51
2	HYDROSALPINX	52	6.6
3	SALPINGITIS ISTHMICA NODOSA	04	0.51
4	ECTOPIC PREGNANCY	55	7.05
5	PARATUBAL CYSTS	05	0.64
6	WALTHARD CELL NESTS	02	0.25
7	TOTAL	780	100.00

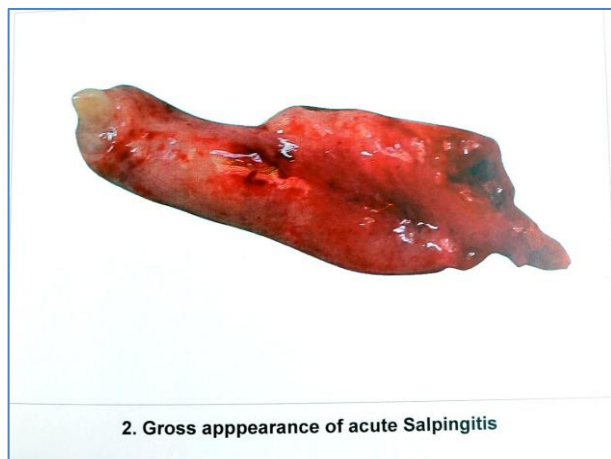


Figure 1: Gross appearance of acute salpingitis

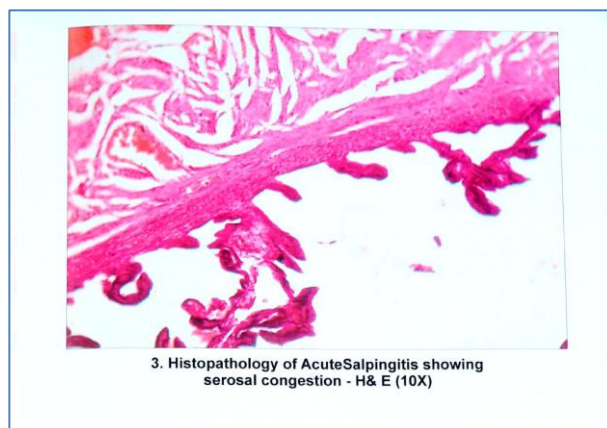


Figure 2: Histopathology of Acute Salpingitis

ACUTE SALPINGITIS:

Grossly, the tube is enlarged. Congestion of all the tubal layers. fibrinous exudate on serosal surface, focal peritonitis and abdominal and pelvic pain.

CHRONIC SALPINGITIS:

Grossly, tube is enlarged. Microscopically, thickened tubal walls are noted. Fibrinous adhesions between the serosa and peritoneal surface.



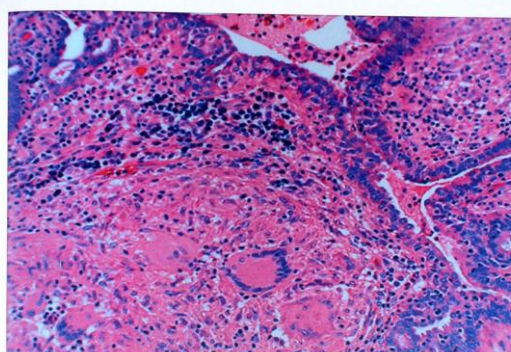
Figure 3: Histopathology of Chronic Salpingitis



Figure 4: Histopathology of tubal pregnancy

Table 2: Age –Wise Distribution of Tubal Lesions

Sr. No.	TUBAL LESIONS	20-25	25-30	30-35	35-40	TOTAL	PERCENTAGE
1	ACUTE SALPINGITIS	-	10	8	-	18	9.78%
2	CHRONIC SALPINGITIS	-	28	12	-	40	21.73%
3	TB SALPINGITIS	-	2	2	-	4	2.17%
4	HYDRO SALPINX	-	28	14	10	52	28.26%
5	ECTOPIC PREGNANCY	11	28	16	-	55	29.89%
6	PARATUBAL CYSTS	-	1	2	2	5	2.71%
7	WALTHARD CELLNESTS	-	-	2	-	2	0.02%
8	SALPINGITIS ISTHMICA NODOSA	2	3	-	-	5	2.71%
9	SUTURE GRANULOMA	-	3	1	1	4	2.17%



15. Histopathology of T.B. Salpingitis - granulomas showing langhan type of giant cells.(H&E) 40x

Figure 5: Histopathology of TB salphingitis**TB SALPINGITIS:**

Adhesive ulcerative form: Little distention and enlargement of interstitial part. Tubercles were noted over the serosa. Adhesions were noted. Inflammatory exudative form: Tubes are markedly distended by exudates. Caseous necrosis. Walls were thin with smooth serosal surface. Eversion of the fimbriae and patency of the abdominal ostium. Tubercles were found in the septa and between epithelium lined spaces and in the mucosal folds, with minimal caseation. Presence of langhan type of giant cells. The lumen contains granules, eosinophilic debris and in advanced cases, with caseous material in the mucosal lesions.

Tubal pathological lesion was seen in 23.58% (184/780) of the cases. In the remaining cases both

the fallopian tubes were grossly and microscopically unremarkable, salpingitis (66) and hydrosalpinx constituted 52, a major group with an incidence of 184/780 (23.58). Majority of the cases of acute salpingitis occurred in the age group of 25-30. Majority of cases of acute salpingitis was observed on accidental findings as tubes recognized along with uterus (abdominal hysterectomy) for treating varied gynaecological disorders.

Histological findings in acute salpingitis showed congestion while in chronic salpingitis showed fibrous adhesions. Tuberculous salpingitis was suspected on gross examination only in one case out of the four cases. Paratubal cysts (5) were seen as small benign cystic lesions. The cyst was lined by flattened epithelium noted in the age group of 30-40 years.

DISCUSSION

During the two years, 780 cases were studied. Tubal pathology noticed in 184 cases (23.58%). The inflammatory pathology was noted in 118.(15.12%) Etiological subtyping of salpingitis was possible in 66 cases. The remaining 52 cases showed hydrosalpinx. Similar findings were noted by Anderson 1991⁵ and Gompel et al 1985.⁶ The clinical presentation of these cases were variable.

In the present study, asymptomatic form of acute salpingitis (18) cases noted in tubes removed during post partum ligation. The process regarded as secondary to the trauma caused during delivery or intrauterine tissue necrosis. Similar findings documented by Sweet et al.⁷

In the present study, 18 cases of salpingitis remained clinically silent and were diagnosed as incidental finding on histopathological examination. The present study correlated with the other authors.^{8,9}

Sweet et al documented that adherence of mucosal plicae, coalescence in the centre, luminal blocking. (clubbed tube). Healing and organization in the non-fimbriated portions of the tube with permanent bridging of the folds. In the present study, similar findings noted in chronic salpingitis. (40 cases).

The changes noted are ampullary and infundibular dilatation of the tube, obliteration of the fimbriated end. In the present study, tuberculous salpingitis was seen in four cases. One case was noted in association with adenomatous hyperplasia. The tubal lining (Moore et al 1975) suggested that such tube significance of proliferative epithelial lesions of the uterine tube.¹⁰ Three cases of tuberculous salpingitis showed serosal tubercles and with obliteration of fimbriae and ostium. These findings are correlated with the findings of (Haines 1958).¹¹ Infertility was observed in association with acute, chronic, and tuberculous salpingitis, highlighting the possible role of inflammatory tubal pathology in causing tubal block and hence infertility. Urman et al 1992,¹² had similar experience in his study

Salpingitis Isthmica Nodosa was noted in four cases. In one case it was associated with ectopic pregnancy of the tube possibly acting as a risk factor for the same. Similar were noted by Majmudar et al 1983¹³.

In the present study, the next major group was formed by tubal ectopic pregnancies, constituting 7.05% (55/780) of the tubal pathology. Ampulla was

the commonest site for ectopic gestation, with rupture was the common outcome. Similar findings observed by Job-Spira et al 1999.¹⁴

Inflammatory predisposing factors was noted in only in ten cases of ectopic pregnancy; hence acting as a potential risk factor. In 45 cases (out of 55) the ectopic pregnancy was diagnosed clinically. The right side tubal pregnancy was noted and correlated with the findings of (Brenner et al 1980).¹⁵

CONCLUSIONS

The total number of fallopian tubal lesion noticed in the present study were 780. Tubal pathological lesions were noted in 184 cases. The inflammatory condition of the tube (salpingitis & hydrosalpinx) constituted a major group. 66 cases (8.46%) of salpingitis 52 cases (6.66%) of hydrosalpinx was noted..

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