TUBAL INFERTILITY : REAPPARAISAL OF ETIOLOGY

PANKAJ DESAI ● MAYA HAZRA

SUMMARY

An analysis of 300 diagnostic laparoscopies with a view to corelate attributes of history with findings is being presented. Of the 174 patients, who showed tubal anomalies, 72% had some positive history, whereas those with normal tubes and no history attributes in 28% instances. The commonest history was suggestive of PID, appendicectomy and puerperal sepsis. The incidence of tubal anomalies steeply increased in patients with more factors ellicitable from history.

INTRODUCTION

Tubal and tubo-peritoneal factors leading to infertility have long been accepted as a major cause of female infertility. According to most authors, it varies between 30% to 40% in incidence (Greenhill 1956, Woodruf 1969, Drake 1977). Success following tubal reconstructive surgery is limited and even with best hands and techniques has tittered around 50% to 60% (Kempers, 1982).

In the mean time however, more attention is paid to the prevention of tubal factors and diseases leading to them. The aim of this study was to obtain more information on relationships between potential risk factors in patient's history and the incidence of tubal infertility.

Dept. of Obst. & Gynec., Medical College & Hospital, Baroda.

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MATERIAL & METHODS

300 patients of infertility who underwent diagnostic laparoscopy in the dept. of obst. & Gynaecology, S. S. G. Hospital & Medical College, Baroda were subjected to this annalysis.

During their visit to the hospital, history taking and preliminary clinical examination was carried out. Preoperatively, all patients underwent routine infertility investigations. However HSG was done post laparoscopy in most cases after tubal factors was identified. Events in the patient's history that were thought to carry any possible etiological attribute in the occurrence of tubal infertility were studied in detail. These possible factors were then annalysed and correlated to the presence of tubal pathology at diagnostic laparoscopy.

RESULTS

Tubal pathology was present in 174 patients. In the other 126 patients no observable abnormality or only minor abnormalities not interfering with fertility were found or laparoscopy.

Table I

History based Risk factors

Factors	Number
P. I. D.	51
Puerperal Sepsis	16
Appendicectomy	51
Salpingectomy	06
Oopherectomy	04
Ovarian Cystectomy	12
Uterine Antefixation	08
Enucleation of fibroid	03
Caesarean Section	13
Tubal Surgery	11
Laparotomy for other reasons	15
Endometriosis	04

Table II

No. of Potential risk factors in patients histories and incidence of tubal pathology

Risk factors/ Pt.	Total	With anomaly	%
0	134	49	36.56
1	91	61	66.81
2	40	32	80.00
3	19	17	90.6
4 or more	16	15	93.8
Total	300	174	58.0

As shown in Table I, 51 had history suggestive of P. I. D. of which 17 (33.3%) had history suggestive of tuberculosis. There were 6 cases with history of ectopic pregnancies in past. There were many patients who had more than one factor in history and thus the number in the table exceeds 174.

As shown in Table II, of the 300 patients 144 did not have any suggestive history and still 39.5% had a tubal factor. This rose significantly and sharply as the number of possible factors in the history increased.

To study the influence and importance of history a reverse approach was used as in Table III. The 300 patients studied were divided into two groups : Women without observable tubal anomaly (n = 126) and women with tubal anomaly (n = 174). P. I. D. & puerperal sepsis had occured more frequently in patients who had tubal anomaly. A negative history was more frequently encountered in the group without tubal anomaly.

DISCUSSION

From the data and literature that was reviewed it was obvious that the various characteristics in the patients history that we studied would overall increase the risk of tubal factor at a later date. A close relationship of all the risk factors included herein like PID, previous operation etc. with infertility have been found in many studies. (Woodruff - 1969; Ellis - H - 1971; Westroml - 1975; Buttram - 1974). However the relative significance of risk factors studied in this respect is illustrated by the increased incidence of tubal factor when the risk factor per patient increased as shown in Table II.

Of the various items PID & puerperal sepsis were the two events most frequently encountered. The role of PID was astongishingly high with nearly 51 (37%) of 174 patients who had tubal anomalies registering positive history of the same. Of these, nearly 30% were patients of tuberculous PID. As shown in Table III,

Table III

Percentage distribution of the Risk factors in the history of patients with or without tubal anomalies

	% incidence of various events in history		
	Negative	PID	Puerperial Sepsis
Patients without observable tubal anomaly (n=126)	68%	2%	1%
Patients with tubal anomalies (n=174)	28%	14%	4%

14% patients with history suggestive of PID showed tubal anomalies whereas only 2% did give such history but there was no tubal anomaly. This shows the magnitude of havoc that this condition can spread and therefore prompt treatment is desired.

There were not many studies that relate the relationship of appendicectomy with tubal anomaly. However, in the present study 51 patients of the total 300 had undergone appendicectomy of which nearly 18 (30%) were complicated appendicectomies highlighting the importance of this fact.

To study the potential of each factor a slightly different approach was used as shown in Table III. This table clearly shows that PID, puerperal sepsis and such complications had occured more frequently in patients who had a tubal factor. A negative history was more frequently encountered in group without tubal anomalies.

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