

Introduction

About 54.3% of the infertile females has subtle distal fallopian tube anomalies, which are non-obstructive anomalies outside the fallopian tube. These include fimbria agglutinations, tubal phimosis, Morgagni hydatids cysts, tubal sacculation, tubal diverticula, accessory tubes, and accessory fimbrial ostia. Unexplained infertility refers to the absence of a clear reason for a couple's infertility and females' inability to conceive after at least 12 cycles of unprotected regular sexual activity. Traditional diagnostic testing does not necessarily indicate no cause for infertility. Laparoscopy can reveal undetected pelvic diseases correlated to subfertility, and surgically correction of these abnormalities can have a therapeutic effect on conception. Applying this management protocol can minimize the use of procedures and reduce costs if IVF is not readily available.

Aim of the Work

The aim of this study was to investigate the prevalence of subtle fallopian tube abnormalities detected during laparoscopy in women with otherwise unexplained subfertility.

Patients and Methods

This observational cross-section study was conducted on 120 infertile women who were originally diagnosed as having unexplained infertility and scheduled for diagnostic laparoscopy at the endoscopy unit at El Shatby University Hospital. All patients were subjected pre-operatively to complete history taking, complete general and pelvic examination and checked for normal TVUS, infertility hormonal assay, and HSG. Upon laparoscopy, correlation with HSG considering tubal patency, and evaluate fallopian tubes for unilateral or bilateral presence of subtle fallopian tube anomalies.

Results

Table 1: Prevalence of subtle fallopian tube abnormalities. (n = 120)

Subtle fallopian tube abnormalities	No.	%
Negative	50	41.7
Positive	70	58.3
Bilateral	43	35.8
Unilateral	27	22.5

Table 1: reveals that 58.3% of women had positive laparoscopic findings for subtle fallopian tube abnormalities, 35.8% had abnormalities in both fallopian tubes and 22.5% had abnormally in one fallopian tube. Despite this, 41.7% of infertile women had normal fallopian tubes and negative laparoscopic findings for these abnormalities.

Table 2: Distribution of cases diagnosed with different types of subtle fallopian tube anomalies.

Tube subtle anomalies	Unilateral		Bilateral		Total	
	No.	%	No.	%	No.	%
Cases diagnosed with subtle fallopian tubal anomalies	27	38.5	43	61.5	70	100
Tubal sacculation	17	24.2	12	17.1	29	41.4
Morgagni cyst	21	30	4	5.7	25	35.7
Tubal agglutination	18	25.7	2	2.8	20	28.5
Tubal phimosis	11	15.7	2	2.8	13	18.5
Tubal diverticulum	5	7.1	1	1.4	6	8.5
Accessory fallopian tube	3	4.28	0	0.0	3	4.28
Sacculation & Phimosis	2	2.8	0	0.0	2	2.8
Sacculation & Morgagni cyst	1	1.4	0	0.0	1	1.4
Sacculation & Accessory ostia	1	1.4	0	0.0	1	1.4
Phimosis & Morgagni cyst	1	1.4	0	0.0	1	1.4

Table 2: reveals that subtle fallopian tube anomalies are prevalent, with tubal sacculation being the most common, accounting for 41.4% of total anomalies. Morgagni hydatid cysts are the second most common, accounting for 35.7%. Fimbria agglutinations and fimbria phimosis contribute to 28.5% and 18.5% of total anomalies respectively. Tubal diverticula and accessory fallopian tubes contribute to 8.5% and 4.28% of total anomalies respectively. The rarest subtle anomalies, accessory fimbrial ostia, contribute to 1.4% and were associated with sacculation on the same tube. There were seven cases of combined subtle fallopian tube anomalies on the same fallopian tube.

Conclusion

- Considering the current findings, we can conclude that laparoscopy is the most accurate method for diagnosis of subtle fallopian tube anomalies, prevalence of subtle fallopian tube abnormalities diagnosed by laparoscopy in unexplained infertility women was 58%.
- There are many reported types of subtle fallopian tube abnormalities; tubal sacculation is the most common subtle anomaly detected, Morgagni cyst, fimbrial agglutination, fimbrial phimosis, tubal diverticulum, accessory fallopian tube, accessory fimbrial ostia which is the rarest subtle anomaly detected.