Complications of Uterine Instrumentation A Preventable Misery on Rise

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Objective: to determine the intra peritoneal injuries after the illegal uterine instrumentation for illegal abortion.
Design: Retrospective study. **Place and duration of study:** The study was conducted over a period of 3 years in North surgical ward Mayo Hospital, Lahore. **Material and methods**: 21 patients were included in the study when they present after the illegal instrumentation of uterus for the abortion. Patients were resuscitated and operated in the emergency theatre. Carefully intraperitoneal injuries were recorded and dealt accordingly. Postoperative complications and mortality were recorded. **Results:** Half of the patients were in the thirties while 4 patients were teenagers. Six patients were unmarried which is approximately 29%. Most of these abortions were done by Dais while 6 were conducted by doctors. Only 35% of the cases present within 24 hours while 28% came to emergency after 10 days of injury. Uterus was injured in more than 76% of cases while fundus is the most common in uterus. Small intestine was damaged in 52%of the patients in which Ileum was injured in 7 patients and jejunum in 4 patients. In 4 patients large intestine was damaged. Ovary and urinary bladder were damaged in one patient each. Resection and exteriorization was done in 14 patients as most of the patients present late and had bad peritonitis. Mortality rate is 5% in our study. **Conclusion:** Peritonitis is the most common sequel after uterine instrumentation as the unauthorized or untrained personnel mostly do it.
Key words: Uterine instrumentation, abortion, complications of abortion

Unsafe abortion is defined by WHO[1] as a procedure for terminating unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking minimal medical standards, or both. Each year, millions of women have an unwanted pregnancy. Some of these are carried to term and others end in induced abortion. It is estimated that each year, 20 million unsafe abortions take place worldwide[1]. Ninety five percent of these occur in the developing world.

Abortion falls under Section 302 of the Pakistani Penal Code. Under it, the death penalty can be awarded "if the crime is proven" against the pregnant women. It adds that the doctor who is conducting the abortion and the husband or any other abettor can also be punished for facilitating an illegal abortion[2].

The common complications after abortion are ascending infection, perforation of uterus or vagina and visceral injury resulting in haemorrhage, pelvic peritonitis or generalized peritonitis.

If timely intervention is not carried out it results in septicaemia, multiple organ failure and even death.

Over 200 women have died from legal abortions since 1973[3]. The risk of death increases according to the duration of pregnancy and the complexity of the abortion technique employed.

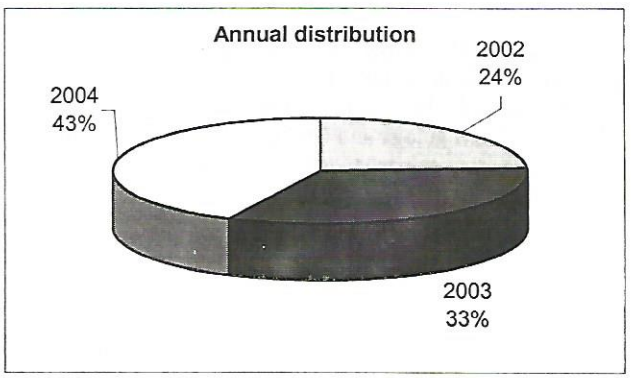
Material and methods:

This retrospective study was conducted in the North Surgical ward, Mayo Hospital Lahore from January 02 to October 04. These patients presented in the emergency department on the days of North Surgical ward after some transvaginal instrumentation. Patients were resuscitated, after recording the vital signs, with crystalloids and plasma expanders. Detail history of patient was recorded from them or their relatives and was thoroughly examined. After patients had been resuscitated they were shifted to operating room for the exploratory laparotomy. Findings were carefully recorded and were dealt accordingly. Patients were managed post operatively in the North Surgical ward under supervisions of consultants of the ward. Postoperative complications were recorded positively and dealt accordingly.

Results:

Twenty one patient were included in the study and their annual distribution is shown in the figure 1. Distribution of patients according to age are shown in Table 1. Marital status of patients are seen in Table 2. In eighty percent of patients the intervention was for termination of pregnancy rest is shown in Table 3. Duration of pregnancy is shown in Table 4. Time lapsed before presentation to seek surgical advice is shown in table 5. Six patients were treated by lady doctors rest is shown in Table 6.

Uterus was the commonest site for perforation details are given in Table 7. Perforation size ranged from 1cm to 10cm as shown in Table 8.



Graph 1: Annual distribution of cases.

Table 1: Age group

Age in years	n=	%age
12-19	04	16
20-30	11	52.38
31-40	06	28.57
41-50	Nil	

Table 2: Marital status

Marital status	n=	%age
Married	15	71.42
Unmarried	06	28.57

Table 3: Marital status

Causes	n=	%age
Termination of pregnancy	17	80.53
1UCD	01	04.76
C-section	02	09.52
Still birth	01	04.76

Table 4: Duration of pregnancy

Duration	n=	%age
> 4 weeks	01	4.76
2-3 months	04	42.95
4-5 months	05	23.2
6-7 month	02	9.52
Full term	03	14.28

Table 5: Time lapsed before presentation.

Time lapsed before presentation	n=	%age
< 24 hrs	8	3.8
1-5 days	3	14.28
6-10 days	4	19
10-30 days	5	23.8
> 30 days	1	4.76

Table 6: Interventionist

Injury site	n=	%age
Dai handling	13	61.9
Nurse	01	4.76
LHV	01	4.76
Doctor	06	28.57

Table 7: Site of injury

Injury site		n=	%age
Uterus	Fundus	10	47.6
	Post wall		
		5	23.8
	Anterolateral wall	1	4.76
Vagina		5	23.8

Table 8: Size of injury.

Size of injury	n=	%age
< 2cm	6	28.57
3-5cm	9	42.85
> 5cm	6	28.57

Table 9: Abdominal visceral injuries.

Abdominal visceral injuries		n=	%age
Small bowel	Jejunum	4	23.5
	Ileum	7	41.17
Large bowel		4	23.5
Urinary bladder		1	5.88
Ovary		1	5.88

Small intestine was commonly damaged during these procedures but other abdominal structures were alsoinjured. Abdominal visceral injuries are shown in the table 9.

Different surgical procedures were carried out in different patients according to the situations preoperatively. All these procedures are mentioned in the table 10.

Table 10: Surgical procedures.

Surgical Procedure carried out.	n=
Adhenolysis	3
Resection and ileostomy	5
Resection and jejunostomy	2
Resection and ileoclostomy	2
Colostomy	1
Resection and anastomosis	2
Lavage and drainage	2
Hartmann's procedure	2
Partial oopherectomy	1
Partial cystectomy	1

Only one patient died in the postoperative period while rests were discharged after had significant recovery. One patient developed short bowel syndrome as most of the jejunum and whole of ileum was damaged during the instrumentation.

Discussion:

The term "Unsafe abortion" proposed by the World Health Organization (WHO) lately has been accepted by most other international health institutions. Unsafe abortion means " abortion not provided through approved facilities and/or persons. Unsafe abortion is one of the great neglected problems of health care in developing countries[1].

We find in our study that most of the patients were handled by Dais, nurses or LHV which were not designated workers and most of them were carried outside the designated hospitals. Same situation was present in Ghana as Lassey AT discovered that 58% of the illegal abortions were carried outside the hospital setup despite the liberation in law[4].

Illegal abortion is getting common in young females due to several social reasons. It is estimated by the WHO that in Indian subcontinent 15-24 unsafe abortions take place per 1000 women aged 15-49yrs[1]. Even large number of patients was teenagers who had illegal abortions. 24% of our patients were below 20 yrs. This ratio was little higher in the study of Ravolamanana Ralisata L et al[5] which is 44.1%. It was also discovered that 29% of female were unmarried as compared to 44% in the study of Ravolamanana Ralisata L et al[4] and 55% in Ikechebelu JI et al[6].

Presentation of patients after uterine instrumentation is quite variable. It mostly depends upon the degree of damage to intra abdominal viscera. Patients who have intestinal injuries present early while those who has

peritonitis due to ascending infection present late. There are few cases that present late despite having intestinal injuries. We recorded 5 patients who had intestinal injuries but presented after 10 days. Leibner EC[7] published two cases in the international journal those presented late (after 17 days) after having uterine and intestinal injuries after abortion. Patients who have only uterine perforation may develop peritonitis, which may be localized or generalized. These patients present with mild to moderate tenderness and may have audible bowel sounds.

Ntia IO et al[8] described that fundus of uterus is the most common site of perforation. They detected in 78% of their patients but we noticed in 10 patients (47%) and in the 6 patients (29%) it was on the either side of fundus. Most probable reason is that if person visualize the external os then they can negotiate through it easily but they cannot assess the length of the uterus so can damage the uterus. If the person introduce the instrument without visualizing the external os then it may damage the vagina.

Small intestine occupy most of the intra peritoneal space and ileum occupies the lower part, so theoretically the chances of damage of ileum is more than the other structures. We found ileal injury in 50% of our patients while Ntia[8] et al detected in 67% of cases. Other intra peritoneal or extra peritoneal structures may be injured but rarely. We found ovarian injury in one patient and urinary bladder injury in another patient.

Management of any surgical patient depends upon the preoperative general condition of patient, extent of intra abdominal injuries and degree of peritonitis. Most of our patients were having unstable preoperative vital signs and bad peritonitis so resection and exteriorization was mostly done. Resection and end-to-end anastomosis was done in few cases that present early because chances of anastomotic leakage are high in former patients. Ntia et al did 9 anastomosis in their patients and 3 of them developed anastomotic leakage[8].

Mortality and morbidity rates following the uterine instrumentation are very high and make the life of many women miserable[3]. Mortality is 5 % in our study while it is different in different research works conducted in different parts of world. India has 6.47% [9], Nigeria has 5.3% [6] while Ghana has 2.4%[4] mortality rates.

Conclusion:

Peritonitis is the most dreadful sequels after illegal abortion as it is mostly done by the un authorized or untrained personnel. High morbidity and mortality rates can be lowered by public education and timely surgical intervention and strict laws implementations.

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