UNSAFE ABORTIONS AND THEIR COMPLICATIONS: RECENT EXPERIENCES IN A RURAL TERTIARY CARE FACILITY

Obstetrics and Gynaecology / Pathology

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ABSTRACT

Introduction: The number of abortions when classified into facility based, medical abortions outside facilities and other type of abortions constituted a medium of 3375252, 14837497 and 807251 cases respectively, when adjusted for various parameters for India. The present study was conducted to include abortions outside medical facilities including methods of abortion, clinical complaints, complications and their management.

Material and methods: The hospital records for patients who underwent abortions were accessed for a four year period from 2016-2020. The number of patients undergoing supervised abortions and patients presenting with incomplete abortions or related complications were recorded. The presenting complaints for spontaneous abortions and abortions done outside medical health facility along with the therapeutic interventions for such unsafe abortions including complications were assessed.

Results: The total numbers of abortions were 4316, out of which hospital supervised termination of pregnancies constituted 59.8% where as abortions or related complications outside a medical facility were 40.2%.

The modes of abortion, presenting features and complications of abortions performed outside medical facilities (total number=1824) and the treatment were recorded. Out of these patients with spontaneous abortions were 36.8% whereas those presenting with complications constituted 63.2%. The commonest method for such abortions was use of abortions pills but other abortifacients and crude instrumentation were also recorded. The commonest clinical feature was discharge per vagina, with retained products of conception causing most complications. The main therapeutic procedure done was dilatation and curettage.

Conclusion: The rural population needs a robust health facility for abortion related care. The sale of abortion pills needs to be tightly regulated. Similarly, crude instrumentation which is a significant cause of morbidity, in unsupervised abortions can be eliminated by awareness and strengthening the health care system making it more approachable for women in rural population.

KEYWORDS

Unsafe abortions, Methods, Complications, Treatment

INTRODUCTION

With recent development in medical sciences, abortion as a cause of maternal mortality is significantly reduced in resource rich developed countries. But in India which has primarily rural population lack of awareness and education along with social taboos and limited health facilities, unsupervised abortions significantly contribute to maternal mortality and morbidity. An unsafe abortion is defined as "a procedure for terminating an unintended pregnancy carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both."¹ Previous study on unsafe abortion and abortion-related mortality in India, estimated overall rate of abortion to be 4.8%, ranging from 1.6% to 6.5% among the nine states. Overall, 67.1% of abortions were classified to be unsafe, varying widely across the states with the highest being 78.3% and the lowest being 45.1%.² Another aspect of such unsafe abortion outside of health facilities was highlighted by method of abortion as increased use of medications 73% and 5% abortions were done using other methods.³ Unsafe abortions employ various methods include drinking toxic fluids, inflicting direct injury to the vagina or elsewhere—for example, inserting herbal preparations into the vagina or cervix; placing a foreign body such as a twig, coat hanger, or chicken bone into the uterus; or placing of inappropriate medication. Unskilled providers also improperly perform dilation and curettage in unhygienic settings, causing uterine perforations and infections; external injury methods such as jumping from the top of stairs or blunt trauma to the abdomen are also used.^{1,4}

With these considerations, we studied the profile of abortions in our institute which was the first Medical College in the Shahjahanpur district, Uttar Pradesh India having population of 3.01 million with urban / metropolitan population of only 329,736 and average literacy rate of 67.25%.⁵

MATERIAL AND METHOD

The hospital records for patients who underwent abortions were accessed for a four year period from 2016-2020. The number of

patients undergoing supervised abortions (Medical Termination of pregnancy) and patients who underwent unsafe abortions presenting with incomplete abortions or related complications were recorded.

Further the presenting complaints for spontaneous abortions and abortions done by untrained people outside medical health facility were recorded. The reasons for such unsafe abortions and also the means/modes were recorded, by a detailed history. The products of conception were subjected to histopathological examination for confirmation and to rule out any other associated pathology.

Therapeutic interventions for such outside medical facility abortions were recorded for addressing complications and definitive care of the patient.

OBSERVATIONS

The total number of abortions were 4416, out of which hospital supervised termination of pregnancies constituted 58.7% (2592 cases). Out of these, 1536 (59.2%) were medical abortions using *Mifepristone* and misoprostol under supervision while surgical termination of pregnancy using dilatation and curettage was done in 1056 cases (40.8%). All such cases underwent ultrasonographical examination, before abortion either by medicines or by dilatation and curettage. The only complication in such cases was failure of abortion or incomplete abortion in *Mifepristone* and misoprostol induced cases (3.4%/54 cases) and subsequently these patients underwent dilatation and curettage.

The total number of unsafe abortions or as patient presenting with spontaneous abortions, incomplete abortions or related complications outside a medical facility were 1824 (41.3%).

Out of these, patients presenting with spontaneous abortions were 672 (36.8%) whereas cases presenting with clinical features of incomplete abortions due to interventions outside health facilities were 1152 (63.2%).

The commonest method for such abortions was use of contraceptive and abortion pills (760cases,66%) but use of other abortifacients (physical, chemical and herbal) and invasive methods using crude instrumentation(144 cases,12.5%) for dilatation and curettage with or without abortifacients were also recorded. (Table 1).

Table 1

Serial number	METHODS FOR UNSAFE ABORTION	NUMBER OF CASES(1152)/ PERCENTAGE (100%)
1	Abortifacient Medications	66% (760)
2	Unsafe dilatation and curettage	12.5% (144)
3	Ayurvedic tinctures with insertion of twigs into cervix	8.5% (98)
4	Herbal mixtures from local plants	2.5% (29)
5	Insertion of metallic objects	4% (46)
6	Insertion of foreign bodies like neem twigs/broom sticks	3% (35)
7	Insertion of herbal medication into cervix/vagina	2% (23)
8	Ingestion of toxic liquids like turpentine oil, bleach solun	1.5% (17)

The commonest clinical feature was discharge per vagina but two other findings which were associated with significantly greater morbidity were incomplete evacuation with retained products of conception and injury to cervix in 87 and 20 cases, respectively. (Table 2)

Table 2

S. No.	Symptoms	Percentage% (Number) 100% / 1824	Signs	Percentage % (Number) 100% / 1824
1	Heavy Bleeding Per Vaginum	58.54% (1068)	Blooding per Vaginum	55% (1003)
2	Severe abdominal pain and cramps	16.18% (295)	Abdominal tenderness	15-07% (275)
3	Weakness	12.36% (225)	Pallor	14.02% (256)
4	Fever / Chills	8.19% (149)	Foul smelling Discharge Per Vaginum	8.82% (151)
5	Incomplete evacuation as per Ultrasonography	4.73% (87)	Fever	5-97% (20)
6.			Injury to Cervix	1.12% (20)

Retained Products of Conception were the most common complication 73.68% with spontaneous incomplete abortions as well as unsafe incomplete abortions followed by sepsis15.13%. The tissue removed was histopathologically confirmed and additional findings like necrosis or inflammation were recorded. Patients presenting or developing shock during the course of treatment were 165 and out of these 18 patients died during the course of treatment. (Table3)

Table3

S.no.	Complications	Percentage/ (Number) 100% (1824)
1	Retained Products of Conception	73.68% (1344)
2	Sepsis	15.13% (276)
3	Shock	9.03% (165)
4	Genital tract injuries. (1) Cervical lacerations (2) Uterine Perforations	1.18% (21) 0.49% (09)
5	Undiagnosed ectopic pregnancy	0.49% (09)

Dilatation and curettage was the main stay of management along with medicines, blood transfusion and supportive treatment. However cases of uterine perforations and ectopic pregnancy were managed by laprotomy. Hysterectomy was performed in three cases of uterine perforations which were multiple and patient had completed family. (Table 4)

Table 4

S.no.	Treatment / Management	Percentage/ (Number) 100% 1824
1	Dilatation and curettage and medicines	78.75% (1436)
2	Dilatation and curettage and Blood Transfusion	16-11% (194)
3	Dilatation and curettage with Repair of cervical lacerations	4.16% (76)
4	Laprotomy for Uterine Perforation	0.35% (06)
5	Laprotomy for ectopic pregnancy	0.49% (09)
6	Hysterectomy for Uterine Perforation	0.14% (03)

DISCUSSION

In this study we first tried to estimate the problem of abortion in a district where the majority of population was rural with limited access to maternal health care facilities. We found that medically supervised abortions in authorized health care facility was 58.7%, which was higher than 40% as reported by World Health Organisation(6) and 22.5% as reported by Singh et al (3). The reason for this can be attributed to greater social networking by public relation officers employed by our private institution for awareness of better health care facilities to the rural population and at the same time implementation and benefits of low treatment costs, available at our institution under various government schemes.

The combination of mifepristone and misoprostol has been shown very efficacious in terminating early pregnancy(<49 days since the last menstrual period) 7, and the same was used for terminating early pregnancies in our hospital. The success rate of this combination of drugs has been documented as ranging from 96.8% to 98.3% 8, and the findings were comparable in our study with a success rate of 96.6%.

In our study, patients presenting with spontaneous abortions were 672 (36.8%) out of total abortions, outside medical health care facilities and the main reasons for presenting to the hospital were delay in periods or discharge per vagina. On further evaluation, the cause was found to be retained products of conception or incomplete abortion. The finding was lower than previously reported as ranging from, 43% - 50% 9. The reason for this can be attributed to early age of marriage in rural population thereby negating the strongest risk factor for miscarriage, that is advanced maternal age 10, however the possibility of underreporting in our study can also not be overlooked as many women undergoing spontaneous abortion may not have reported to the hospital in absence of any complications due to reasons such as denial, forgetfulness, and/or miscarriage mistaken for delayed menstruation, as previously reported.9

Singh et al. estimated the incidence of unsafe abortion in India, on basis of outside health care facility to be 78% where 73% abortions were done using medicines and 5% using other methods. 3 The Annual Health Survey for Madhya Pradesh, India reported 45% of abortions occurred at health facilities, indicating a potentially large utilization 55% of unsafe abortion services. 11. Our study estimated the incidence of unsafe abortions to be 41.3 %, which was significantly lower than previous studies. The reason for this is higher level of functionality and better outreach in the catered population, ours being a private sector institution and same has been by documented by Chaturvedi et al. 11.

Medical abortion or abortion by orally administered regimens of Mifepristone and Misoprostol has recently been accepted worldwide as an effective and safe option for early abortion. It is a safe procedure, with mortality rates comparable with spontaneous abortion.12 An important finding in study by Singh et al. was that most abortions are medication abortions, and most medication abortions are obtained outside health facilities using the combined medication abortion protocol of mifepristone plus misoprostol but little is known about what kind of information women are getting when they obtain this method from chemists and informal vendors, and whether they are taking it correctly. 3 We also found that majority of abortions outside health facilities and patients presenting with abortion related complications had used the combination of Mifepristone and Misoprostol without supervision and proper dosage (66%). The procurement of these drugs and their method of use could not be documented as women were not forthcoming and gave only vague replies like from unidentifiable female health worker, local chemist shops or from some relatives. An important complication of this unsupervised mode of usage of these drugs was their use in undiagnosed ectopic pregnancy, which in our study were 9 cases and

laprotomy had to be performed, as a life saving measure in all these patients. Debnath J et al found that history of intake of mifepristone and misoprostol was present in 43.75 % of cases of ectopic pregnancy related abortions cases and concluded that ectopic pregnancy may remain under-diagnosed with potentially serious consequences in patients who have taken these drugs without prior confirmation of intrauterine gestation. **13**

Unskilled providers also improperly perform dilation and curettage in unhygienic settings, causing uterine perforations and infections **14**. Similarly, other methods of abortion used by unskilled health workers like oral, local or intravaginal use of herbal, medical or corrosive substances / liquids as abortifacients has also been documented **14**. Unsafe abortions using dilatation and curettage apart from being incomplete abortions can lead to serious complications like hemorrhage, septicemia, septic shock, and visceral injuries including uterine perforations which at the time of curettage during first trimester abortion go unrecognized and untreated.**[15]** We found that sepsis, shock and genital tract injuries constituted 26.94 percent of such unsupervised abortions and surgical management was mainstay of treatment in 4.65% of cases and included repair of lacerations, laprotomy and hysterectomy.

The complications of unsafe abortions include hemorrhage, sepsis, peritonitis, and trauma to the cervix, vagina, uterus, and abdominal organs.**16** Similarly post abortion care is also not offered to women as untrained village level health care providers who perform these unsafe observations exacerbate the post abortion complications and in the process increase not only the cost but also associated morbidity.**17** Bleeding per Vaginum along with pallor constituted the most common clinical features in our study constituting nearly 70% of all women undergoing unsafe abortions. These are difficult for a rural woman to explain or discuss due to social customs and they reported to the hospital only as a last resort. Acute presentation of other complications like fever, tender abdomen, sepsis and shock were also a significant contributor to morbidity and again the patients reported to the hospital as last life saving measure.

CONCLUSION

The present study shows that the rural population needs a robust health facility for abortion related care and at same time better management of complications. The institutional facilities whether public or private with proper motivation can help reduce this morbidity and can encourage rural women for approaching health care facility for abortion and related care. The sale of abortion pills (although government regulations exist but implementation needs to be strengthened) needs to be tightly regulated and again crude instrumentation which is a significant cause of morbidity, in such unsupervised abortions can be eliminated by education, awareness and strengthening the health care system making it more approachable for women in rural population.

LIMITATIONS

The present study included only those patients who reported to this hospital, which was the first tertiary care center in the district but it cannot be extrapolated to reflect on the entire district population, where the burden may be higher.

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