

## Exploring determinants of septic abortion: improving the evidence base in Western Orissa, India

Arun Kumar Singh

### ABSTRACT

**Background:** Septic abortion continues to contribute to the perennial burden of maternal mortality in the developing countries. Literature regarding the characteristics of cases from Orissa, India is virtually non-existent to formulate a preventive hypothesis. **Materials and methods:** Fifty consecutive cases of septic abortion treated in 3 maternity hospitals in rural part of western Orissa, India. Hospital records of these patients are analyzed to explore the epidemiological variables associated with such cases. Study design: Descriptive Epidemiology-Retrospective study of hospital records. **Result:** Septic abortion is common among married and multiparous women, of low socioeconomic status in the age group of 19-30 years. Timely intervention provided good cure rate. **Conclusion:** Adequate counseling regarding Medical Termination of Pregnancy at the grass-root level may help in curbing this menace to maternal health.

**Key words:** Septic abortion, criminal abortion, MTP Act.

---

---

### INTRODUCTION

An abortion that becomes complicated with infection is called septic abortion and this complication is frequently associated with induced abortions. WHO defines unsafe abortion as a procedure for terminating an unintended pregnancy either by individuals without necessary skills or in an environment that does not conform to minimum medical standard or both.<sup>1</sup>

Every year, almost 42 million abortions take place throughout the world; out of which 20 millions are terminated illegally often performed by unskilled providers and/or in unhygienic conditions [2]. Almost 98% of these illegal abortions take place in developing

countries. According to the WHO, 2-12% of maternal deaths in developing countries are due to complications of abortions.<sup>3</sup> Therefore reducing unsafe abortions and the complications resulting from them is directly linked to improved maternal mortality.

There is a wide variation in the age-wise variation of septic abortions in different geographical locations. While in African countries teenage abortions are common, in Asia the proportion is higher in 30-44 age group [4,5,6,7,8]. Accordingly, Induced abortion is common in unmarried women in Africa, and married women in Asia [9]. Similarly, most of the abortion septic abortion patients are multipara in Asian countries compared to the African nations [5,6,7,8,10,11]. Various studies have speculated the close relationship between septic abortion with poverty and illiteracy [8,12]. Therefore, the rate of unsafe abortion is higher in underdeveloped and developing countries compared to the developed nations. Unsafe abortion is closely linked to religion in India. Statistics shows that the abortion rate is highest among Hindus compared to

---

---

**Authors affiliation:** Assistant professor, Obstetrics and Gynaecology, Alluri Sitaram Raju Academy of Medical Sciences, Eluru, west Godavari District, Andhra Pradesh, India.

**Reprints requests:** Dr Arun Kumar Singh, C/O- Mr Prafulla Chandra Pradhan, At- Mangala Mandir, Isam Nagar, Near Police Hospital, P.O./ District- Balasore, ORISSA

Muslims and other religion [2,7,8]. Studies from developing nations reveals that the countries, where abortion laws are restricted, most of the abortions are performed by local unqualified quacks [2,10,11,12,13,14] The quacks try to abort the pregnancies by using orthodox methods like inserting foreign bodies to uterine cavities, oral administration of poisonous substances (abortifacients), and sometimes inserting poisonous substances into the uterus. Therefore the chances of an induced abortion getting septic is very high in these procedures [4,7,10,11,13].

Being concerned over the existing high maternal mortality and morbidity in India, the Government in recent years has started 'Janani Surakshya Yojna, targeting to provide a safe motherhood [15]. Although septic abortion and its complications have been acknowledged as an important public health problem, reliable data regarding the distribution of cases, and the epidemiological variables are lacking from Orissa. Therefore, the present study was undertaken to study the vulnerable population and simultaneously to explore the preventable situations.

## MATERIALS AND METHODS

Fifty cases of septic abortions admitted to a tertiary care hospital in Western Orissa over a period of one year, formed the study population for the purpose of the present appraisal. Using the WHO definition, we categorized the unsafe abortions. The causative organisms are isolated from high vaginal swabbing by culture in order to further classify the septic abortions. The hospital records of these patients were analyzed to evaluate the age group distribution, parity, marital status, socio-economic background, the person performing the abortion, complications and the resulting outcome. Study design: Descriptive epidemiology by retrospective analysis of hospital records. Inclusion criteria: all cases admitted with history of unsafe abortions. Exclusion criteria: patient leaving the hospital against medical advice.

## RESULT

The mean age of unsafe abortion in our study population was 32.4 years. Maximum patients belonged to 21-30 years (50%) followed by the

age group of 31-40 years (32%). Eighty percent of the patients were married; 20% unmarried; none were widowed or divorced. Among the married couples, most were multipara, with more than one living children. Our population mainly consisted of Hindus (92%). In most of the cases 31 (62%), the untrained local quacks performed the procedure. Midwifery, and nurses were involved in 13 (26%) of cases, while the patient herself tried in 6 cases. Among the victims, 84% belonged to lower economic strata and the rest to middle strata. The commonest method employed for inducing abortion was local trauma, i.e. insertion of foreign body into the uterus (70%), followed by ingestion of poisonous substance (14%). Unknown poisonous substances were introduced into the uterine cavity in 12% of cases.

During admission, the most common presenting complications were generalized peritonitis (60%) resulting from perforation of uterus, followed by shock (56%) and renal failure (24%). In spite of these dreaded complication, 80% of the victims fully recovered. Four patients were referred to other specialties for further management. The mortality rate in our study was 12%.

## DISCUSSION

We observed that the most vulnerable group for an septic abortion in western Orissa are the poor married women belonging to 21-30 years of age, who have already more than one children. Similar finding were observed by different authors conducting studies in other parts of India as well as in the neighboring countries [6,7,8,9,10,11,12]. Our study population comprised of the women from western rural Orissa, a state laden with illiteracy and poverty, where the age for marriage among girls is considerably low. So, most of these poverty stricken women can not afford to rear more than one or two children. Any pregnancy after that is considered unwanted for the family. Due to illiteracy, the use of contraceptive is also very low in this part of the world. Hence the pregnant women frequently resort to clandestine method of procuring abortion [6,8,10,11,14]. The doctor population ratio in Orissa (particularly western Orissa) is one of the lowest among the Indian states. Most of the doctors' post in government

**Table 1. The demographic characteristics of victims of septic abortion**

Age	No (n=50)	%
14-20	9	18
21-30	25	50
31-40	16	32
<b>Marital status</b>		
Married	40	80
Unmarried	10	20
<b>Parity</b>		
Nullipara	12	24
Multipara	38	76
<b>Socioeconomic status</b>		
Lower	42	84
Middle	08	16
<b>Religion</b>		
Hindu	46	92
Muslim	4	8
<b>Interference by</b>		
Untrained quacks	31	62
Midwifery/ nurses	13	26
Self	6	12

**Table 2. The gynaecologic variables associated with septic abortion**

	No. (n=50)	Percentage
<b>Methods employed</b>		
Insertion of foreign body (local trauma)	35	70
Ingestion of a poisonous substance	7	14
Insertion of poisonous substance	6	12
Others	2	4
<b>Complications</b>		
Generalized peritonitis	30	60
Shock	28	56
Renal failure	12	24
Septicaemia	5	10
Faecal fistula	3	6
<b>Outcome</b>		
Completely cured	40	80
Death	6	12
Referred to other specialties	4	8

hospitals lays vacant perennially, which is also a significant reason why most of the abortions are induced by the local unqualified quacks having minimal knowledge of female genital system anatomy [7,10,12,13].

Local trauma inflicted by inserting a foreign body is the commonest method employed. This finding has already been observed by other researchers from various parts of the developing nations [4,7,13]. This may perhaps be the well accepted and well established among the quack communities. However, this method carries an inherent hazard in that, if not employed properly,

resulting in peritonitis [7,8,10,11]. This may be the main reason to explain for the majority of the women presenting with the features of generalized peritonitis. The other notable dreaded complications observed in our study are shock and renal failure. However, although we could have successfully treated majority of the patients; we could not save the life of 10% of our patients from this abhorrently stigmatized practice.

## CONCLUSION

The victims of septic abortion in western

women belonging to underprivileged society. The abortions are induced mostly by unqualified local quacks using the traditional and hazardous methods resulting in life threatening complications. Although it seems that reduction in the general poverty level and mass education are the genuine and authentic solutions, it appears unfeasible in the present day scenario of the State as well as the Central Government. Therefore, adequate propaganda and encouragement regarding the available family planning procedures and the medical termination of pregnancy remains as a reasonable and practicable alternative.

### REFERENCES

1. Grimes DA. Unsafe abortion: the silent scourge. *Br Med Bull.* 2003; 67: 99-113.
2. Shah I, Ahman E. Unsafe abortion: global and regional incidence, trends, consequences, and challenges. *J Obstet Gynaecol Can.* 2009; 31(12): 1149-58.
3. World Health Organization. Complications of abortion: Technical and managerial guidelines for prevention and treatment. Geneva: WHO. 1995; 14.
4. Rasch V. Unsafe abortion and post-abortion care - an overview. *Acta Obstet Gynecol Scand.* 2011; 90(7): 692-700.
5. Rabiou KA, Omololu OM, Ojo TO, Adewunmi AA, Alugo BG. Unsafe abortion in Lagos, Nigeria: a continuing tragedy. *Niger Postgrad Med J.* 2009; 16(4): 251-5.
6. Bahadur A, Mittal S, Sharma JB, Sehgal R. Socio-demographic profile of women undergoing abortion in a tertiary centre. *Arch Gynecol Obstet.* 2008; 278(4): 329-32.
7. Siddique S, Hafeez M. Demographic and clinical profile of patients with complicated unsafe abortion. *J Coll Physicians Surg Pak.* 2007; 17(4): 203-6.
8. Guleria K, Bansal S, Agarwal N, Grover V. Women with septic abortion: who, how and why? A prospective study from tertiary care hospital in India. *Indian J Public Health.* 2006; 50(2): 95-6.
9. Wu S, Tian L, Xu F. Induced abortion and relevant factors among women seeking abortion in Nanjing, China. *Gynecol Obstet Invest.* 2011; 71(2): 87-92.
10. Jain V, Saha SC, Bagga R, Gopalan S. Unsafe abortion: a neglected tragedy. Review from a tertiary care hospital in India. *J Obstet Gynaecol Res.* 2004; 30(3): 197-201.
11. Naib JM, Siddiqui MI, Afridi B. A review of septic induced abortion cases in one year at Khyber Teaching Hospital, Peshawar. *Ayub Med Coll Abbottabad.* 2004; 16(3): 59-62
12. Chatterjee C, Joardar GK, Mukherjee G, Chakraborty M. Septic abortions: a descriptive study in a teaching hospital at North Bengal, Darjeeling. *Indian J Public Health.* 2007; 51(3): 193-4.
13. Bankole A, Sedgh G, Oye-Adeniran BA, Adewole IF, Hussain R, Singh S. Abortion-seeking behaviour among Nigerian women. *J Biosoc Sci.* 2008; 40(2): 247-68.
14. Majlessi F, Forooshani AR, Shariat M. Prevalence of induced abortion and associated complications in women attending hospitals in Isfahan. *East Mediterr Health J.* 2008; 14(1): 103-9.
15. Iyengar SD, Iyengar K, Gupta V. Maternal health: a case study of Rajasthan. *J Health Popul Nutr.* 2009; 27(2): 271-92.