

Abortion and the Load Of Its Immediate Complications In Orrota Maternity Hospital

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ABSTRACT

Background: Abortion is considered not only a major reproductive health matter, but also as a health risk factor for mother's well-being and threatening their lives and comforts.

Objectives: To assess the prevalence of abortion and its immediate complications and the possible risk factors associated with abortion in Orrota Maternity Hospital (OMH), Eritrea.

Methodology: A descriptive and analytical - a cross-sectional study was conducted on 250 women admitted with abortion into the gynecological ward of OMH from January – June, 2016. Data were collected by interviewing a structured questionnaire and analyzed using IBM SPSS software version 20.

Results: Abortion cases were 14% of all deliveries and 64 % of all gynecological admissions. The immediate complications of abortion accounted for 60%. On assessing the risk factors, the maternal age group was 21-30 years (54%), lack of contraceptives use (73.6%), primary and above educational level (96%), extraneous mechanical movements and work overload (44%).

Conclusion and Recommendations: The prevalence of abortion and its immediate complications is high in OMH. Not using contraceptives and extraneous mechanical movements and work overload may be important public health issues predisposing the occurrence of abortion. Measures should be taken to increase the use of contraceptives. Effective education should be given, during the antenatal visits, to mothers about the effects of mechanical movements and overload on pregnancy.

Keywords: abortion, immediate complications, associated factors

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I. Introduction

Abortion is one of the causes of morbidity and mortality in women of child bearing age. Abortion is a pregnancy loss or termination of pregnancy (TOP) before the fetus reaches viability.

The risk factors for abortion include increased gravida (more than four)status, age greater than 30, unwanted pregnancy, age, educational status, (Tesfaye, Hambisa & Semahegn, 2014). Additionally being rural, having irregular menses, not recognizing their pregnancy at early time are also other contributing factors (Mulat , Bayu , Mellie & Alemu, 2015). There are common postabortal complications, which include bleeding, fever, bladder injury, bowel injury, uterine perforation, severe abdominal pain etc. (bioethics@deveber.org).

Approximately 210 million women become pregnant each year throughout the world and 80 million pregnancies end in still birth i.e spontaneous or induced abortion (Kihinrwa, 2008). In Eastern Africa region alone, 2.3 million abortions occurred in 2003, making abortion rate in the region 39 per 1000 women of child bearing age. Every day, approximately 1000 women die from preventable causes related to pregnancy and childbirth and 99% of all maternal deaths occur in developing countries (Gelay, Taye & Mekonen, 2014).

Maternal health problems are one of the major public health challenges, especially in developing countries. Abortion is among the reproductive problems that is either taking lives of many young girls or leaving them with chronic PID (Pelvic Inflammatory diseases) including infertility. (Guttmacher, 2012).

A study done by Ghidey (2015) that assessed the magnitude of abortion in National and Zoba referral maternity centers reported that in Orrota Maternity Hospital (OMH) abortion case load was 16% of all deliveries and 110% of all gynecological cases. Another research done in Eritrea in 2006 also showed that 24.7% (89/368) of abortion cases had developed immediate complications namely infection and bleeding (Sebhatu, Zerezhgi, Asrat & Tsegai, 2006). MOH (Ministry of Health) annual reports showed that sepsis as one of the complication of abortion, to be the second leading cause of maternal death in Eritrea (MOH, 2013). However, there is no

evidence about burden of possible risk factors associated with abortion. Therefore, attempts were made in this study, which is expected to fill the gap of lacking information related to possible risk factors associated with abortion. Additionally, the magnitude of immediate complications of abortion in OMH will be assessed.

II. Materials And Methods

Hospital based descriptive and analytical cross sectional study design was conducted for 6 months (from January – June, 2016) , after the approval from Asmara College of Health sciences (ACHS) and Ministry of Health Scientific and Research Ethical Committee, in Orrota Maternity Hospital, which is found in Southwest Asmara. It is one of the largest national referral hospital providing comprehensive maternal services in Asmara, Eritrea. Not only it provides health services but also it is a teaching hospital where medical and nursing students practice their clinical sessions.

All women with abortion admitted into the gynecological ward of OMH during the study period were used as our sample. A mother was not our candidate to participate if she was mentally ill, unable to hear and unwilling to give consent was our exclusion criteria.

Data collection and Analysis tools

Data were collected using a structured pre-tested questionnaire, which covered thematic areas that includes demographic data of mothers, gynecologic and obstetric information, current and/or chronic maternal medical conditions and their complaints on admission. Pilot test was conducted on twelve mothers to see the validity and reliability of the questionnaire. No gaps were found to be amended. After collection of the data, questionnaire was checked for completeness and consistency and the variables (responses) were coded and entered into IBM SPSS software version 20. Descriptive statistics was used to compare the results among the study groups using frequency distribution count, percentages, and cross tabulation. Furthermore a binary logistic regression analysis model was used to test the significance or the strength of the association at 0.05 significance level.

III. Results And Discussion

• Abortion case load

During the study period the data was collected from a total of 250 women with abortion admitted in the gynaecologic ward of OMH, over a period of six months. Then the total admissions of abortion were compared with the total number of vaginal and caesarean deliveries during the study period to estimate its caseload. The results revealed that abortion was 14% of all deliveries as shown in **Figure 1**. This result is slightly low compared to the study done by Ghidey (2015), which estimated about 16% of all the deliveries to be abortion cases. But it is high as compared to Ethiopian study that estimated 12% (Meseret, Gedefaw, Berhe & Nigusie, 2015). Comparing to the total gynaecologic admissions, abortion cases accounted for 64% i.e. about 2/3 of all the gynaecologic admissions, which is also lower than the study done by Ghidey (2015) that showed abortion case load to be 110% of the total gynaecological admissions.

Fig.1. Abortion case load

• Magnitude of abortion immediate complications

From the total 250 abortion cases admitted in the gynaecologic ward, 150 (60%) developed immediate complications, and the leading complication was bleeding amounted to 114 (45.6%), as shown in **Figure 2**. The result of this study is higher than a study done by Kihinrwa (2008) in Uganda that estimated prevalence of abortion complications among women with abortions to be 33.7%, with most common complications being septic abortions (46.7%) and severe hemorrhage (41.3%).

Fig. 2: Magnitude of immediate complications of Abortion

• Risk Factors Associated with abortion

Mothers of age between 21-30 years were the majority in our study (54%) as shown in Table 1, which is correspondent with a Nigerian study that showed more than half (52%) of the participants to be between the age 21-30 years (Jibril, et al., 2014).

A study conducted in Uganda (Kihinrwa, 2008) reported that a total of 55 % of the abortion occurred in adolescent girls aged between 17-20 years. In our study only 6% were 15-20 years of age. In this study majority of the respondents attained primary and above educational level with a significant difference at p-value <0.001, $\beta = 3.079$ (as shown in Table 3), which is similar to a study done in Gonji kollela District, Northwest Ethiopia found that those women whose educational attainment was primary and above were 2.4 times more likely to experience abortion than those who were not able to read and write (p-value =0.023) (Meseret et al., 2015). In our study participants those who were not using contraceptives accounted for 73.6 % and the

difference was statistically significant with (p-value < 0.0001, $\beta = 1.025$ Table 3), in which more than half of them (56.5%) were in between age 21-30 years which is in line with a study done in Hungary, as reviewed by Gelay et al. (2014) that concluded contraceptive usage was less frequent by the mothers who had abortion.

Table 1. Socio-demographic factors

Variable	Categories	Frequency	Percentage (%)
Age	< 20	15	6
	21-30	135	54
	31-40	91	36.4
Educational level	41-50	9	3.6
	Illiterate	10	4
Religion	Primary & above	240	96
	Orthodox	199	79.6
Residency	Catholic	11	4.4
	Protestant	13	5.2
	Islam	27	10.8
	Rural	61	24.4
	Urban	189	75.6

In this study the majority of the mothers were gravida 1-2, 95 (38%) as shown in Table 2, which is in contrary to the study done in Nigeria (Jibril et al., 2014) that stated majority 51 (40.5%) of the mothers were gravida 3 and 4. Mothers who had history of previous abortion accounted for 86 (34.4%), which is contrary to the study done in Japan revealed that mothers who had history of previous abortion were 2.36 times to experience abortion compared to those who hadn't history of previous abortion. (Baba, Noda, Nakayama, Waguri et al, 2014).

Table 2. Gyn/Obstetric related information

Variables	Categories	Frequency	Percentage (%)
Gravida	1-2	95	38
	3-4	77	30.8
	>4	78	31.2
Parity	Nulliparous	55	22
	1-2	102	40.8
	3-4	54	21.6
	>4	39	15.6
Previous abortion	Yes	86	34.4
	No	164	65.6
Contraception Use	Yes	66	26.4
	No	184	73.6

We also assessed mothers' suggestions on the reasons that predisposed abortion as shown in **Figure 3**. Majority of the mothers (44%), mentioned abortion resulted as a result of extraneous mechanical movements and work overload. This is lower than the study done in Ethiopia (Mulat et al., 2015) that revealed 54.2% mentioned that abortion to be as a result of mechanical movements and overload, but this difference could be due to difference in study site. A study in Japan by Baba et al (2014) showed that mothers who work outside home were 1.65 times to experience abortion than those who work at their home.

Fig. 3: Mothers suggested reasons contributing to abortion

Table 3: Logistic regression analysis model

Variable	Categories	Odds Ratio (β)	Standard Error	Chi-square (χ^2)	P-value
Mothers education	+ Illiterate	0.000	0.308	256.346	*0.000
	Primary and above	3.079			
Gestational Age	≤ 12 weeks	0.646	0.133	24.747	*0.000
	+ >12 weeks	0.000			
Family planning	No	1.025	0.143	57.974	*0.000
	+ Yes	0.000			

+ indicates Reference category;
* indicates statistical significance at a level of 0.05

IV. Conclusion And Recommendations

CONCLUSION

The prevalence of abortion and its immediate complications is high in OMH. Abortion is high among early adult women with low contraceptive usage, educated (literate), and having work overload.

RECOMMENDATIONS

- As this study has found that younger, among age groups of 21-30 years old with lesser gravid status and who are healthier and literate mothers has high abortion rate it is an area that warrants further exploration.
- The high ranking policy makers should take measures to increase the utilization of contraceptives by mothers.
- Effective education should be given, during the antenatal visits, to mothers about the effects of mechanical movements and work overload on pregnancy.

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