academicJournals

Vol. 6(2), pp. 24-31, April, 2014
DOI: 10.5897/IJNM2013.0105
ISSN 2141-2456

http://www.academicjournals.org/AJPP

International Journal of Nursing and Midwifery

Full Length Research Paper

Spontaneous abortion among women admitted into gynaecology wards of three selected hospitals in Maiduguri, Nigeria

Umar N. Jibril[1]*, Olubiyi S. Kayode[1], Aliyu Umar[2], Aminat G. Umar[3], Imam A. Abubakar[4], Ibraheem M. Ayoade[4] and Nwadiliorah J. Blessing[5]

[1]Department of Nursing Science, College of Health Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria.
[2]Department of Nursing Services, National Hospital Abuja, Nigeria.
[3]Department of Mathematics and Statistics, Kwara State College of Education Technical Lafiagi, Nigeria.
[4]Department of Nursing Science, College of Health Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria.
[5]Department of Nursing Science, College of Medical Sciences, University of Maiduguri, Borno State, Nigeria.

Received 29 June, 2013; Accepted 11 March, 2014

Abortion is considered not only a major reproductive health matter, but also as a health risk factor for mothers' well-being which also threaten mother's lives and comfort. This study seeks to assess the incidence of abortion with particular reference to factors responsible for spontaneous abortion among women admitted into gynaecology wards of three selected hospitals in Maiduguri, Borno State, from January to June, 2012. This study involved 126 women admitted into gynaecology wards of University of Maiduguri Teaching Hospital (UMTH), State Specialist Hospital and Nursing Home in Maiduguri, Borno State from January to June, 2012, respectively. Data were collected using questionnaire items that comprised open and close-ended questions items. Women who were illiterate were interviewed during their hospitalization period and their records were also used for more data. The data were analyzed using frequency distribution count. The study shows that of 126 women, 65 (51.6%) were between the ages of 31 to 40 years, the Gravida status of women that presented more were Gravida 3 to 4 (40.5%) with 51 women. On the causes of present abortion, maternal causes presented more with about 26 (20.6%) of the women. On the management of spontaneous abortion, it is managed expectantly, medically (use of prostaglandin and uterotonic drugs) and surgically by the use of manual vacuum aspiration and dilation and curettage were found to be in us. Based on the information obtained from the study, it was recommended that efforts should be concentrated on providing quality services for the management of post abortion complications.

Key words: Abortion, spontaneous abortion, recurrent spontaneous abortion.

INTRODUCTION

Abortion is commonly misunderstood outside medical circles. Medically, abortion means loss of the fetus, for any reason, before it is able to survive outside the womb (Annas and Sherman, 2007). The term covers accidental

*Corresponding author. E-mail: umaribna@gmail.com or umar.nj@unilorin.edu.ng. Tel: +2348065482455 or +2347083532333.

or spontaneous ending, or miscarriage, of pregnancy as well as deliberate termination. The terms 'spontaneous abortion' and 'miscarriage' are synonymous and are defined as loss of the fetus before the twenty-eighth week of pregnancy (The Royal Society of Medicine Health Encyclopedia, 2000). Abortion is the termination of pregnancy by the removal or expulsion from the uterus of a fetus or embryo prior to viability (Grimes et al., 2006). An abortion can occur spontaneously, in which case it is usually called a miscarriage, or it can be purposely induced. The term abortion most commonly refers to the induced abortion of a human pregnancy. However, miscarriage is the spontaneous loss of a fetus before the 20th week of pregnancy (Pregnancy loss naturally or on its own after the 20th week are called preterm deliveries) (PubMed Health, 2013). A miscarriage may also be called a "spontaneous abortion." It is also refers to as naturally occurring events, not to medical abortions or surgical abortions. The expulsion or removal of a fetus from the womb before it is capable of independent survival it term as abortion (World Encyclopedia, 2008).

Spontaneous abortion is defined as pregnancy loss before 24 completed weeks of pregnancy. The occurrence of a spontaneous abortion is a tragic loss for a couple trying to have a child and can be associated with significant psychological problems for women, their partners and families in general. For most women, spontaneous abortion is a stressful event and they as well go on to have successful pregnancies in the future. About 1% of couples will experience recurrent spontaneous abortion (Patricia, 2001), as most spontaneous abortion occurs within the first 14 weeks of pregnancies. Maternal age and previous number of spontaneous abortions are independent risk factors for a further spontaneous abortion (Patricia, 2001). Vaginal bleeding is the most common symptom of a spontaneous abortion; the bleeding may be slight spotting but it could sometimes be heavy with clots. The bleeding is usually followed by cramp in the lower abdominal area (Medline Plus, 2004). Only 30 to 50% of conceptions progress beyond the first trimester. The vast majority of those that do not progress are spontaneously aborted before the woman is aware of the conception, and many pregnancies are lost before medical practitioners could detect the presence of an embryo. Between 15 and 30% of known pregnancies end in clinically apparent spontaneous abortion, depending upon the age and health of the pregnant woman (Royal College of Obstetricians and Gynaecologists, 2003).

Spontaneous abortion is a matter of concern because of its impact on maternal morbidity and mortality in public health. Spontaneous abortion is not only an important issue of reproductive health, but also a health risk factor for mothers' well-being. Women who experience a miscarriage are more likely to sustain another unless they have a medical condition that is likely to cause recurrent spontaneous abortions. Up to 97% of women who experience spontaneous abortion will continue to have a healthy baby with a subsequent pregnancy and up to 75% of women who have had 3 or more spontaneous abortions have a subsequent normal pregnancy and baby (Petrozza et al., 2006).

The clinical presentation of a threatened abortion describes any bleeding seen during pregnancy prior to viability which has to be assessed further. At investigation, it may be found that the fetus remains viable and the pregnancy continues without further problems (Gracia et al., 2005). Alternatively, the following terms are used to describe pregnancies that do not continue.

Threatened abortion

Threatened abortion could be any vaginal bleeding during early pregnancy without cervical dilatation or change in cervical consistency. Usually, no significant pain exists, although mild cramps may occur.

Inevitable abortion

Inevitable abortion is an early pregnancy with vaginal bleeding and dilatation of the cervix. Typically, the vaginal bleeding is worse than with a threatened abortion, and more cramping is present, no tissue has passed yet.

Incomplete abortion

Incomplete abortion is a pregnancy that is associated with vaginal bleeding, dilatation of the cervical canal, and passage of products of conception. Usually, the cramps are intense, and the vaginal bleeding is heavy.

Complete abortion

Complete abortion is a completed spontaneous abortion. After the tissue passes, the patient notes that the pain subsides and the vaginal bleeding significantly diminishes. The ultrasound demonstrates an empty uterus.

Missed abortion

A missed abortion is a nonviable intrauterine pregnancy that has been retained within the uterus without spontaneous abortion. Typically, no symptoms exist besides amenorrhea, and the patient finds out that the pregnancy stopped developing earlier when a fetal heartbeat is not observed or heard. Spontaneous abortions can occur for many reasons, not all of which can be identified. Some of these causes include genetic, uterine or hormonal abnormalities, reproductive tract infections, and tissue rejection.

Chromosomal abnormalities

These are found in more than half of embryos miscarried in the first 13 weeks. A pregnancy with a genetic problem has a 95% probability of ending in spontaneous abortion (Bukulmez and Arici, 2004). Up to 15% of pregnancy losses in the second trimester may be due to uterine malformation, growths in the uterus (fibroids), or cervical problems. Pregnancies involving more than one fetus are at increased risk of spontaneous abortion. The most common cause of spontaneous abortion during the first trimester is chromosomal abnormalities of the embryo/ fetus, accounting for at least 50% of sampled early pregnancy losses. Other causes include vascular disease such as lupus, diabetes, other hormonal problems, infection, and abnormalities of the uterus (Gracia et al., 2005; Bukulmez and Arici, 2004). Advancing maternal age and a patient history of previous spontaneous abortion are two leading factors associated with a greater risk of miscarriage (Everett, 1997). Spontaneous abortion can also be caused by accidental trauma; intentional trauma or stress to cause spontaneous abortion is considered induced abortion or feticide (Lok et al., 2010). The overall percentage of pregnancies that end in spontaneous abortion lies between 10 and 15%, while spontaneous abortion accounts for about 50,000 inpatients admitted to hospitals in the UK annually. Recurrent spontaneous abortion affects 1% of all women (Royal College of Obstetricians and Gynaecologists, 2003).

Spontaneous abortion is greater than that expected by chance alone (0.34%). The incidence of spontaneous abortion is high in Nigeria and was found to be one of the leading causes of maternal and fetal mortality. Out of 5 million pregnancies, it is pathetic that 54,000 result into abortion, out of these 54,000 maternal deaths estimated to occur in Nigeria annually, nearly 20,000 are attributable to complications of unsafe abortion, 7,000 results in spontaneous abortion, and prematurity in Nigerian women (Ladipo, 1999). Okonofua (1994) observed that typically, the distribution of spontaneous abortion rates by age occurs among women younger than 35 years old, 15% spontaneous abortion rate; 35 to 39 years old, 20 to 25% spontaneous abortion rate; 40 to 42 years old, about 35% spontaneous abortion rate; and older than 42 years old, about 50% spontaneous abortion rate. Many women who have had spontaneous abortions, however, object to the term "abortion" in connection with their experience, as it is generally associated with induced abortions (Everett, 1997).

Several factors have been identified as general risk factors to spontaneous abortion, among which are uncontrolled diabetes and polycystic ovary syndrome (PCOS) with 30 to 50% of pregnancies in women with PCOS are miscarried in the first trimester. Preeclampsia also known as high blood pressure during pregnancy, is sometimes caused by an inappropriate immune reaction (paternal tolerance) to the developing fetus, and is associated with the risk of spontaneous abortion. Hypothyroidism severe cases increase the risk of spontaneous abortion. The presence of certain immune conditions such as autoimmune diseases is associated with a greatly increased risk of spontaneous abortion. Other attitudinal factors such as tobacco (cigarette) smoking, cocaine and caffeine consumption, physical trauma, exposure to environmental toxins, and use of an intra uterine device (IUD) during conception has also been linked to increased risk of spontaneous abortion (Armenian Medical Network, 2005). Antidepressants drugs especially paroxetine and venlafaxine can lead to spontaneous abortion (Broy and Bérard, 2010).

The risk of spontaneous abortion increases with advancing maternal age from about 9% at age 20 years to 80% at age 48 years. It is worth noting that this increase is observed irrespective of a woman's reproductive history. The incidence of spontaneous abortion is higher in the developing country with Africa ranking number one in the list (Everett, 1997; Pollack et al., 2009). The Gravida of the mother is a significant risk factor, as spontaneous abortion rates increase steadily with increased gravid, with more substantial increases after the 4th pregnancy (Pollack et al., 2009). Study by Merziah (2003, 2004) on the incidence of spontaneous abortion in selected institutions, revealed that out of 2470 women who participated in the study, 230 of them have had spontaneous abortion. 95 (41.4%) of the women affected were older than 45 years of age, 32% were between 20 and 44 years and the remaining 26.6% were aged less than 20 years. Another study showed that the increased risk of spontaneous abortion in pregnancies of older women is mainly seen in the first trimester (Slama et al., 2005). Yet another study by Andersen et al. (2000) showed an increased risk in women at the age of 45 years, of the order of 80% (compared to the 20 to 24 age group in this study), 75% of pregnancies ended in spontaneous abortion. Bongaarts and Westoff (2004) in their study on 456 clients admitted to a public hospital in Ardabil district (Alavi Hospital). Data were collected by interviewing women during their hospitalization period, the study shows that from all deliveries by woman attended to (456), 96 (21.1%) have experienced abortion/ miscarriage in their last deliveries, and the rest (78.9%) did not have such an experience. From those who have experienced an abortion/miscarriage, 13.5% have been classified as induced, while the rest is spontaneous.

Based on the aforementioned prevalence and incidences of abortion, this study seeks to assess the incidence of abortion with particular reference to factors responsible for spontaneous abortion among women admitted into gynaecology wards of three selected hospitals in Maiduguri Borno State, from January to June, 2012. Specifically, the study examined the age and the Gravida status of women who presented more with spontaneous abortion in gynaecology ward. This study

also examined various management of spontaneous abortions among women in the three selected Hospitals.

METHODOLOGY

Design

A non-experimental descriptive design was used to examine the factors responsible for spontaneous abortion among women admitted into the gynaecological wards of three selected hospitals in Maiduguri, which are the University of Maiduguri Teaching Hospital (UMTH), Maiduguri Nursing Home and State Specialist HospitalMaiduguri, respectively. A self-designed questionnaire was used to collect data from literate women while, the same questionnaire was translated into Hausa and Kanuri languages for majority of women who cannot read nor write in English language. Folders were obtained from the record department of the three selected Hospitals and information concerning the diagnosis, possible causes or associated risk factors responsible for the abortion were collected using a researcher's designed checklist.

These questionnaires and the researchers designed checklist were used to obtain information on the socio-demographic variables, Obstetric History, Cause of previous abortion, Causes of present abortion and information on theManagement of spontaneous abortion. The questionnaire and a researcher's designed checklist developed were shown to obstetricians and gyaneacologist in the University of Maiduguri Teaching Hospital for both content and face Validity. The instrument was pre-tested on women admitted in a gynaecology ward of Umaru Shehu Ultra-Modern Hospitals Maiduguri for its consistency. The adjustment and modifications of the instruments were made based on the findings of the pre-test. Copies of introductory letters were submitted to the Ethical Research Committees of the three selected hospitals for consideration and approval for the conduct of the study. The Committees issued permission letters to the Chief Nursing Officers in-charge of Gynaecology wards, medical and record departments of the three mentioned hospitals for permission to conduct the study (Table 1).

RESULTS

The analysis of this study was based on the total number of 126 women admitted from January to June 2012, that is, 16 on admission and 110 women treated and discharged.The finding of this study shows that University of Maiduguri Teaching Hospital (UMTH) has the largest number of abortion cases 53.2%, compared to other health facilities in the study.

Tables 3 shows higher prevalence of threaten abortion among women who attended University of Maiduguri Teaching Hospital compared to women who attended other health institutions by types of abortion.

The study further revealed that little above half (51.6%) of women were between 21 and 30 years, signifying that these women were in their early adults age who constituted higher percentage (75.4%) of women admitted as compared to other categories (Table 2).

57.9% of women were married Muslims and about 38.9% and 27.8% were predominantly Kanuris and Hausas, respectively. Quite significant numbers () of women had their primary education, while 28.6% attended attended tertiary institutions, respectively. The highest number 51 (40.5%) of women are Gravida (3 to 4), closely followed by Gravida 7 women and above (37.5%). Among 39 (31%) of women who have had spontaneous abortion before, infection/malaria, typhoid, and maternal cause were found to be responsible for 9(23.1%) their abortion are responsible for 9 (23.1%), respectively. On the causes of present abortion, 20.6% of the women reported that maternal factor was responsible for the spontaneous abortion. Table 5 revealed the distribution of abortion by types of management at different hospitals. The management of abortion in almost all the hospitals is similar based on the type of abortion and the condition in which the case was reported

DISCUSSION

Research question 1: What is the incidence of spontaneous abortion among women admitted into the three selected gynaecology wards in Maiduguri?

Out of 718 (17.5%) women admitted into gynaecology ward with history of abortion in the three selected hospitals in Maiduguri, the incidence of spontaneous abortion is high with a total number of 126 women diagnosed of spontaneous abortion. The State Specialist Hospital has the highest 38 (30.2%) cases of threatened abortion followed by University of Maiduguri Teaching Hospital (UMTH) with 19 (28.3%) of the women and Maiduguri Nursing Home 21 (16.7%) of the women also had threatened abortion, 8 (38.1%) as the highest diagnoses of spontaneous abortion. This shows that the incidence of spontaneous abortion is high and this corresponds with the reports of Okonofua (1994) in which he observed that out of 54,000 maternal death that is estimated to occurs in Nigeria annually, about 7000 of this death are due to spontaneous abortion and nearly 20,000 are attributed to complications of unsafe abortion. This is similar to the study conducted by Bongaarts and Westoff (2004), who reported that from all deliveries by woman attended to (456), 96 (21.1%) had experienced abortion/miscarriage in their last deliveries, and the rest (78.9%) did not had such an experience. From those who have experienced an abortion/miscarriage, 13.5% have been classified as induced, while the rest were spontaneous abortions. These findings both from this study and the previous findings showed that there was an increase in the prevalence of spontaneous abortion as compared to other types of abortions among multiparous women.

Research question 2: What is the Gravida status of women admitted who presented more with spontaneous abortion in gynaecology wards of hospitals in Maiduguri?

It appears from this study that the status of women

Table 1. Distribution of the respondents according to the hospital.

Hospital	No. of women	Percentage
University of Maiduguri Teaching Hospital	67	53.2
State Specialist Hospital Maiduguri	38	30.2
Maiduguri Nursing Home	21	16.7
Total	126	100

Table 2. Socio-demographic characteristics of women.

Characteristic	Frequency	Percentage
Age		
Less than 20	7	5.5
21-30	32	25.4
31-40	65	51.6
More than 40	22	17.5
Total	126	100
Marital status		
Single	11	8.7
Married	95	75.4
Divorced	12	9.5
Separated	8	6.3
Total	126	100
Religion		
Christian	51	40.5
Muslim	73	57.9
Traditional	Nil	0
Other	2	1.6
Total	126	100
Tribe		
Kanuri	49	38.9
Marghi	17	13.5
Hausa	29	23
Others	31	24.6
Total	126	100
Educational qualification		
Primary school	35	27.8
Secondary school	24	19
Diploma	16	12.7
Degree	15	11.9
Others	36	28.6
Total	126	100

Gravida admitted with more spontaneous abortion were Gravida 3 to 4 (40.5%) which indicate that multiparous women are mostly affected by spontaneous abortion than primigravida. This finding agrees with Pollack (2009) who found that spontaneous abortion rates also increases with the Gravida status and further explains that the Gravida status of the mother could be a significant risk factor of spontaneous abortion. Spontaneous abortion rates increase steadily with increasing Gravida status, with more substantial increase of the rate after 4th pregnancies (Pollack et al., 2009). The result also corresponds to the study that was conducted from January to August, 2002 on the causes and contributing factors of spontaneous abortion among women admitted into 3 general hospitals in Sudan, where out of the 312 woman who were diagnosed of spontaneous abortion, 70% of them were Gravida 4 and above. Everett (1997) also reported an increased Gravida status in association with spontaneous abortion. Table 4

Research question 3: What are the factors responsible for spontaneous abortion among women admitted into the three selected hospitals in Maiduguri?

Various factors have been identified as being responsible for spontaneous abortion among women admitted into three studied hospitals, it was discovered that the main cause of spontaneous abortion was from the maternal factors including diabetes and uterine fibroid. This corresponds to the study of Petrozza and John (2006) on the causes and incidence of spontaneous abortion in women admitted from January to December, 2005 at a general hospital in Ghana. In the study, a total of 212 cases of women diagnosed of spontaneous abortion, majority (44%) of the causes of spontaneous abortion in women were due to maternal factors including uterine fibroids, diabetes, hypertension, renal failure, smoking and alcohol consumptions. Fetal cause was another factor identified with percentage in close range with maternal causes such as chromosomal abnormalities and this had agreement with the work of Patricia (2001) in which he stated that over 20% of spontaneous abortion is caused by fetal factors including chromosomal abnormalities. Although, it was also revealed that the causes of spontaneous abortion in some cases is unknown this finding was in agreement with the study by Patricia (2001).

Research question 4: Will the age of women attendant in the three hospitals influence the occurrence of spontaneous abortion?

Majority of the women who participated in the study were

Table 3. Attended by types of abortion diagnosed.

Characteristic	University of Maiduguri Teaching Hospital		State specialist		Nursing home	
	Frequency	%	Frequency	%	Frequency	%
Threatened abortion	29	28.3	12	31.6	8	38.1
Inevitable abortion	13	16.4	06	13.2	Nil	0
Missed abortion	07	9	03	5.3	Nil	0
Septic abortion	06	7.5	03	5.3	3	14.3
Incomplete abortion	09	12	05	10.5	2	9.5
Complete abortion	11	14.9	09	21.1	5	23.8
Total	67 (53.2%)	100	38 (30.2%)	100	21 (16.7%)	100

abortion is higher among middle aged mothers and prevalence rate increases with maternal age. This finding corroborate with the study by Everett (1997), who opined that advancing maternal age and patient history of previous spontaneous abortion are the two leading causes associated with a greater risk of miscarriage. This study is contrary to the study conducted in Iran by Merziah (2003, 2004); (Andersen et al., 2000), which revealed that majority (41.4%) of the women were older than 45 years of age as compared to the women below the age of 20 (26.6%) who were younger. The finding of this study however, agrees with research question that advanced maternal age influenced women with spontaneous abortion who were admitted into the three hospitals at Maiduguri.

Research question 5: How is spontaneous abortions managed among women admitted in the three selected hospitals in Maiduguri?

There are similarities in the management of spontaneous abortion in the three health facility centers selected for this study; the study found that management of spontaneous abortions depends on the types and various laboratory investigations that have been done to guide different interventions. In threatened abortion as well as septic abortion, women are given complete bed rest and advised to refrain from sexual and strenuous activities, they are also managed surgically by evacuation using manual vacuum aspiration to empty the content of the uterus and also the use of broad spectrum antibiotics, haematenics and analgesics were employed in almost all the three health hospitals in Maiduguri. This finding agrees with the study by Omole-Ohons and Ashimi (2007). On the incidence and management of spontaneous abortion among women admitted in the General Hospital of Dunukofia, Local Government Area of Anambra State, Nigeria, who in their finding observed that complete bed rest is the methods employed by the physician in the management of threatened abortion. In the case of inevitable abortion, it is managed medically with various forms of drugs such as Syntocinon/Ergometrine and surgically by evacuation as indicated by the patient's condition, while missed abortion is managed using intravaginal misoprostol and manual vacuum aspiration. In the case of septic abortion, surgical evacuation and the use of broad spectrum antibiotics are used for the management of the condition, while incomplete abortion is managed using uterotonic drugs such as syntocinon and ergometrine alongside with manual vacuum aspiration in other to completely empty the contents of the uterus, this is contrary to the study of Omole-Ohons and Ashimi (2007) in which they use dilatation and curettage in the same condition. Complete abortion is managed medically with the use of analgesics and antibiotics and surgically intervention is not required and this also agrees with the study of Omole-Ohons and Ashimi (2007).

IMPLICATIONS FOR NURSING AND MIDWIFERY PRACTICE

Nurses and midwives constitutes the majority among health care professionals who have so far adapt to the provision of various services in the majority of antenatal clinics in Nigeria, to this end, the nurses and midwives have a great role in health education of the general public and the pregnant women during antenatal visits on the causes and factors that predispose women to spontaneous abortion, such as age and number of children a woman has along with other chromosomal factors which predisposes her to spontaneous abortion. Although a woman physically recovers from a miscarriage quickly, but the psychological recovery for parents in general can take a long time. People differ greatly in this regard: some are able to move on after a few months, but others take more than a year. Still others may feel relief or other less negative emotions. Interaction with pregnant women and newborns is often painful for parents who have experienced miscarriage. Sometimes this makes interaction with friends, acquaintances and family very difficult.

Base on the aforementioned therefore, it is incumbent on nurses and midwives to health educate pregnant women during antenatal care and during hospitalization so as to improve their knowledge on spontaneous abortion

Table 4. Obstetric history of women.

Variable	Frequency	Percentage
Gravidae status		
1-2	22	17.5
3-4	51	40.5
5-6	28	22.2
7 and above	25	35.7
Total	126	100
History of previous abortion		
Yes	39	31
No	87	69
Total	126	100
Cause of previous abortion		
Unknown	7	18
Illegal abortion	7	18
Fetal cause	3	7.7
Maternal cause	9	23.1
Infection/Malaria and typhoid	9	23.1
Accident and trauma	3	7.7
Strenuous activity	1	2.6
Total	39	100
Cause of present abortion		
Unknown	20	15.9
Illegal abortion	18	14.3
Fetal cause	24	19
Maternal cause	26	20.6
Infection/Malaria and typhoid	17	13.5
Accident/trauma	15	12
Strenuous activity	6	4.8
Total	126	100

Table 5. Distribution of management of abortion by types.

Types of spontaneous abortion	Management of present abortion
Threatened abortion	Complete bed rest, abstinence from coitus and any strenuous activities
Inevitable abortion	Syntocinon/Ergometrin, dilatation and curettage, evacuation, broad spectrum antibiotics
Missed abortion	Intra-vaginal misoprostol, manual vacuum aspiration
Septic abortion	Surgical evacuation, broad spectrum antibiotics
Incomplete abortion	Manual vacuum aspiration, cyntocinon and ergometrine
Complete abortion	Broad spectrum antibiotics

and self-care during pregnancy. The nurses should however take into consideration the fact that these women are fragile and should handle them with care by given them all the physical, emotional and psychological care that is needed.

Conclusion

Base on the result of this study the researchers observed that, the age and Gravida status play a significant role in the occurrence of spontaneous abortion and it can be managed expectantly, medically and surgically. The challenges associated with the management of spontaneous abortion in the three selected hospitals are inability of the spouse especially the women to accept that the fetus is no longer viable except in the case of threatened abortion, this therefore make women in this condition delay in coming for treatment and they suppose

this action will save the baby and the living of the woman. In order to reduce these complications that may occurs as a result of delayed treatment, nurses and various hospitals management need to put measures in place to avert the death of unborn child and the mother.

RECOMMENDATIONS

Based on the conclusion of this study, we recommend that the government, the nurses and hospital managements should ensure that:

1. Governments at all levels begin to develop a set of realistic policies and programs to address the high rate of morbidity and mortality associated with pregnancy related problems especially spontaneous abortion.
2. Appropriate mechanisms to be put in place in providing quality maternal health services such as obstetrics emergency kit in all health institutions for the prevention and management of post abortion complications.
3. Government and non-governmental organizations working in the community development and health care services must recognize the role that education of women during antenatal clinic play a role in eliminating the problems associated with spontaneous abortion in Nigeria.
4. Health education programs should as a matter of policy be directed towards family planning, early reporting to health centers when the need arises to reduce the high levels of morbidity and mortality among pregnant women.
5. The community health nurses and midwives should educate women in the community during antenatal visits on the symptoms of spontaneous abortion so as to report early.
6. The government should provide reproductive health facilities and support health workers in rural places in the early detection of miscarriage/abortion condition and provide specialized and immediate management to the victim.

ACKNOWLEDGEMENTS

The authors are sincerely grateful to the entire women who participated in this study from the three selected Hospitals in Maiduguri, Nigeria; they also appreciate the cooperation's of the research and ethical committees as well as the heads of the units of the study areas for their support which make this study possible. This study would not have been possible without the participation of staff of the various hospitals. The authors commend the efforts and cooperation given throughout the study period.

Conflict of Interests

The author(s) have not declared any conflict of interests.

REFERENCES

Andersen AM, Wohlfahrt J, Christens P, Olsen J, Melbye M (2000). Maternal age and fetal loss: population based register linkage study. BMJ. 320(7251):1708–1712.

Annas GJ, Elias S (2007). Legal and Ethical Issues in Obstetric Practice". Gabbe SG, Niebyl JR, Simpson JL (eds.), Obstetrics: Normal and Problem Pregnancies, 5th ed. Elsevier Churchill Livingstone, Philadelphia, Pa. Chapter 51. ISBN 978-0-443-06930-7

Armenian Medical Network (2005). "Miscarriage: An Overview." http://www.health.am/pregnancy/more/miscarriage_an_overview/.

Bongaarts J, Charles FW (2004). "The Potential Role of Contraception in Reducing Abortion" Population Council; 2000:134. Available at: http://www.popcouncil.org/pdfs/wp/134.pdf

Broy P, Bérard A (2010). Gestational exposure to antidepressants and the risk of spontaneous abortion: a review. Curr. Drug Deliv. 7(1):76–92.

Bukulmez O, Arici A (2004). "Luteal phase defect: myth or reality". Obstet. Gynecol. Clin. North Am. 31(4):727–44.

Everett C (1997). Incidence and outcome of bleeding before the 20th week of pregnancy: prospective study from general practice". BMJ. 315(7099):32-4.

Gracia CR, Sammel MD, Chittams J, Hummel AC, Shaunik A, Barnhart KT (2005). "Risk factors for spontaneous abortion in early symptomatic first-trimester pregnancies". Obstet. Gynecol. 106(5 Pt 1):993-9.

Grimes DA, Benson J, Singh S, Romero M, Ganatra B, Okonofua FE, Shah IH (2006). "Unsafe abortion: The preventable pandemic." Lancet 368(9550):1908–1919.

Ladipo OA (1999). Preventing and managing complications of induced abortion in third world countries. Int. J. Gynaecol. Obstet. 3.

Lok IH, Yip AS, Lee DT, Sahota D, Chung TK (2010). A 1-year longitudinal study of psychological morbidity after miscarriage. Fertil. Steril. 93(6):1966–1975.

Okonofua FE (1994). Induced abortion: a risk factor for secondary infertility in Nigerian women. J. Obstet. Gynaecol. 14:272-276.

Patricia LJ (2001). A Pediatrician Looks at Babies Late in Pregnancy and Late Term Abortion. Presbyterians Pro-Life. Retrieved from. http://www.ppl.org/index.php/publications/abortion-and-christian-faith/65-scientific-and-medical/113-a-pediatrician-looks-at-babies-late-in-pregnancy-and-late-term-abortion-a-comprehensive-report-to-the-acl-on-the-subject-of-viability-and-late-term-abortion Accessed 3rd March, 2012.

Petrozza JC, Berin I (2006). Recurrent Early Pregnancy Loss . http://emedicine.medscape.com/article/260495-overview Retrieved 12 January 2012.

Pollack AZ, Buck LGM, Sundaram R, Lum KJ (2009). Caffeine consumption and miscarriage: a prospective cohort study. Fertil. Steril. 93(1):304–306.

Royal College of Obstetricians and Gynaecologists (2003). The investigation and treatment of couples with recurrent miscarriage", Green-top Guideline No. 17. Available at: http://www.rcog.org.uk/womens-health/clinical-guidance/investigation-and-treatment-couples-recurrent-miscarriage-green-top-

Slama R, Bouyer J, Windham G, Fenster L, Werwatz A, Swan S (2005). Influence of paternal age on the risk of spontaneous abortion. Am. J. Epidemiol. 161(9):816–823.

The Royal Society of Medicine Health Encyclopedia (2000). Abortion and miscarriage. Bloomsbury Publishing, London.

Wikipedia (2013). Miscarriage. Available at: http://en.wikipedia.org/wiki/Miscarriage Accessed 4th September, 2013.