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# EFFICACY OF MISOPROSTOL IN TREATMENT OF INCOMPLETE ABORTION

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**ABSTRACT : Abortion is the embryo expulsion from the mother uterus or fetus weight 500gm or less with incapability of independent survival (WHO). This study is cross sectional done to evaluate the efficacy of misoprostol in management of incomplete abortion. Through this study, general survey on the attendants who are admitted to Salah Ad-Din General Hospital in a period from November 2016 to February 2017 and we have studied how these frequencies are affected by different sociodemographic and environmental factors. The sample was 60 females; 26.66% of them were aged between 18-25 years; while 41.66% of them were aged between 26-35 years and 30% of them were aged over the 35 years' Concerning the use of misoprostol to induce the abortion: there were about 63.33% had a complete abortion; while 36.66% had not. 61.66% of them used the misoprostol orally; while about 38.33% of them used it vaginally. Only 16.66% of them had side effect of misoprostol; while 83.33% had no side effect with misoprostol. We recommended with minimal training, primary health care facilities who are less equipped with personnel and equipment to perform MVA could potentially treat women with incomplete abortion using misoprostol.**

***Key words :*** Embryo expulsion, incomplete abortion, misoprostol.

## INTRODUCTION

Abortion is the embryo expulsion from the mother uterus or fetus weight 500gm or less with incapability of independent survival (WHO). There are two types of abortion spontaneous and induced abortion. Spontaneous abortion classified in to isolated or recurrent. Abortion could be threatened, inevitable, complete, incomplete, missed or septic. Incomplete abortion occur aspregnancy products not expelled from the uteruscompletely and some of pregnancy products are remain in the uterus. The common type of abortion in hospitalized females is incomplete abortion (Farquharson *et al*, 2005). The treatment for incomplete abortion is the surgery (by curettage or vacuum aspiration). Although, the surgical procedures effective, they may needs kills, specialized equipment, as well as they introduced the females to risk on a surgical procedure–injury, perforations, sepsis, hemorrhage, and problems of anesthesia (WHO, 2011; Talemoh *et al*, Int. J. Gynecology and Obstetrics, 2008). If women live far a way of medical centers and not have access to transportation way, they may be needed to stay at the hospital for a long period, that may be difficult and costly for both patient and hospital. And especially in some areas of sub-Saharan Africa, as most of women may have low immunity AIDS infection, the risk of sepsis (Mitchell *et al*).

Different studies have showed that the role of misoprostol in uterotonic and cervical ripening consider it safe and more effective intreatment of incomplete abortion (AshMonga, Fawole *et al*, 2012; Shochert *et al*, 2012; WHO, 2011, 2012; American College of Obstetricians and Gynecologist, 2012; VSI, 2012; Fawole *et al*, 2012). Most ofstudies about misoprostol as a drug in treatment of incomplete abortion, however, were conducted in countries which are developed or middle-income (Fawole *et al*, 2012; Shochert *et al*, 2012; WHO, 2011, 2012; American College of Obstetricians and Gynecologist, 2012; VSI, 2012; Fawole *et al*, 2012; Bique *et al*, 2007) or in big cities of developing countries mostly, tertiary care centers (AshMonga and Stephen; WHO, 2011). A dose of 600 mg orally of misoprostol were chosen on the basis of two earlier dose-finding studies conducted in Thailand and Vietnam and a further recent large study in Kampala, Uganda (AshMonga and Stephen). Two of these (AshMonga and Stephen; VSI, 2012) that reached the highest good rates documented by a large study to date (≥95%), using a single 600 micrograms of misoprostol orally. Some studies about misoprostol using

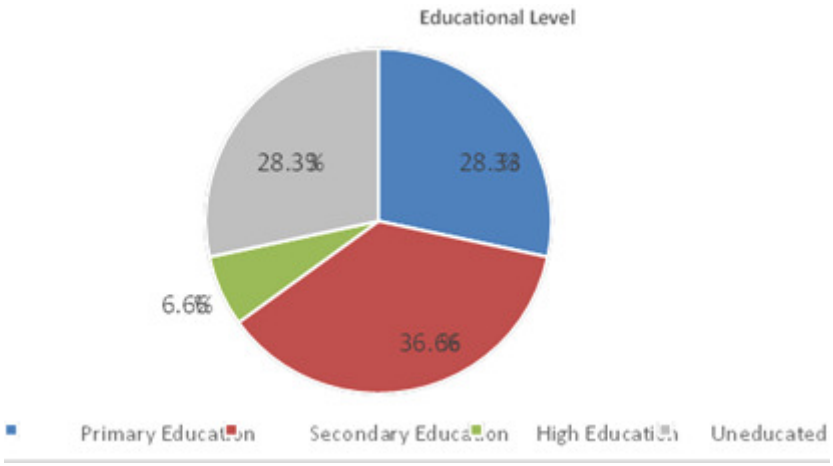


**Fig. 1 :** The educational level of the respondent.

in treatment of incomplete abortion favorite misoprostol vaginally, (WHO, 2012; ACOG, 2009; VSI, 2012; Fawole *et al*, 2012; Bique *et al*, 2007) most of these studies have preferred the oral route (AshMonga and Stephen Dobbs; Fawole *et al*, 2012; Shochet *et al*, 2012; WHO, 2011; WHO, 2012; ACOG, 2009; Fawole *et al*, 2012). Some females that consider vaginal route difficult and not acceptable than orally and there is possibility that vaginal route may lead to infection. It's found that Misoprostol manage incomplete abortion excellently in at least 19 studies with success rate 13-100%, but most of slowing efficacy of misoprostol at about 90% (WHO, 2012). Sublingual misoprostol appear to be more effective than oral route because peak serum levels being achieved faster and longer duration of therapeutic levels (VSI, 2012; Fawole *et al*, 2012; WHO, 2012). Many studies founda misoprostol effective as vacuum aspiration in treating incomplete abortion whenuterus size of up to 12 weeks. The recommendation is to give many advantages of misoprostol over vacuum aspiration in low resource settings, Misoprostol must be widely available for a good treatment of incomplete abortion in the developing world.

## MATERIALS AND METHODS

Current work is cross sectional study, it was achieved in Salah Ad -Din General Hospital in a period from November 2016 to February 2017.

Sample included 60 women with incomplete abortion who admitted to the hospital in this period. The sample was convenience sample. Data collection was done by self-administered questionnaire that include type ofabortion, methods of evacuation, route of misoprostol, dose, sides effects. Data analysis, management and presentation: Collected data presented by simple tables and figures then analyzed statistically.

## RESULTS

The study was conducted on 60 females; 26.66% of them were aged between 18-25 years; while 41.66% of them were aged between 26-35 years and 30% of them were aged over the 35 years' old; 53.33% of them were living in the rural areas while 46.66% of them were living in the urban (Table 1).

**Table 1 :** Socio demographic characteristics of the respondents.

| Variables | | No. | % |
|---|---|---|---|
| **Age** | 18 - 25 | 16 | 26.66% |
| | 26 - 35 | 25 | 41.66% |
| | > 35 | 18 | 30% |
| **Resident** | Rural | 32 | 53.33% |
| | Urban | 28 | 46.66% |
| **Total** | | 60 | 100% |

**Table 2 :** Using of misoprostol to induce abortion.

| Variables | | No. | % |
|---|---|---|---|
| **Abortion** | Complete | 38 | 63.33% |
| | Un complete | 22 | 36.66% |
| **Rout** | Orally | 37 | 61.66% |
| | Vaginal | 23 | 38.33% |
| **Side effect** | +ve | 10 | 16.66% |
| | -ve | 50 | 83.33% |
| **Total** | | 60 | 100% |

According to the educational level of the respondent there were about 28.33% of them had a primary school degree; while about 36.66% of them had the secondary school degree. And about 6.66% of them had a College Degree; while about 28.33% of them were uneducated (Fig. 1).

Concerning the number of pregnancy that the respondent had there were about 38.33% of them had been pregnant for 1 to 3 times; while about 40% of them had been pregnant for 3 to 5 times and about 21.66% of

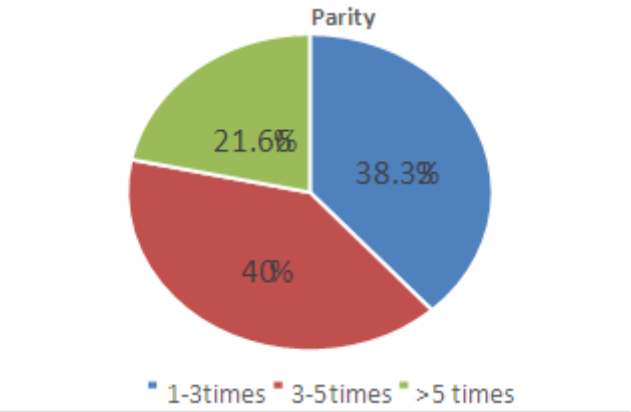


**Fig. 2 :** Number of pregnancies that the despondent had.

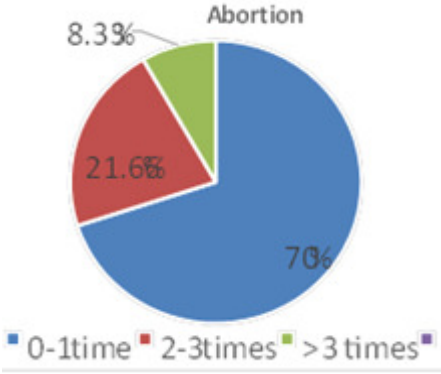


**Fig. 3 :** The number of abortion that the participants had.

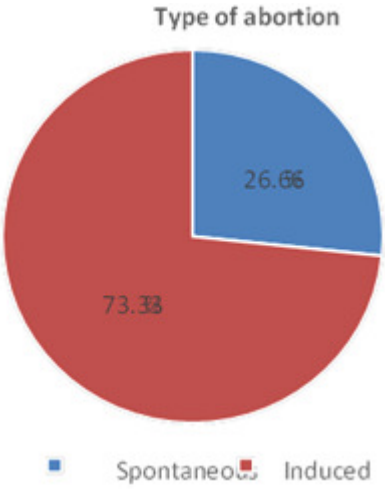


**Fig. 4 :** The type of abortion that the participation had.

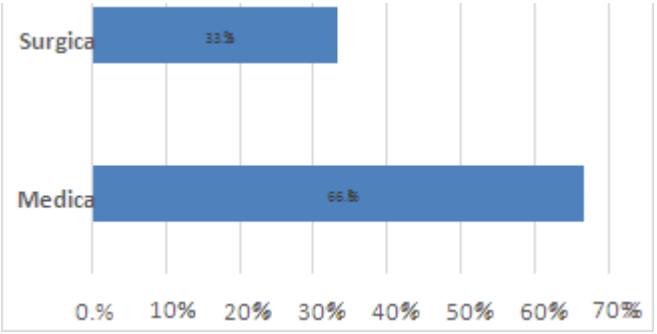


**Fig. 5 :** The method that the participants used for the abortion.

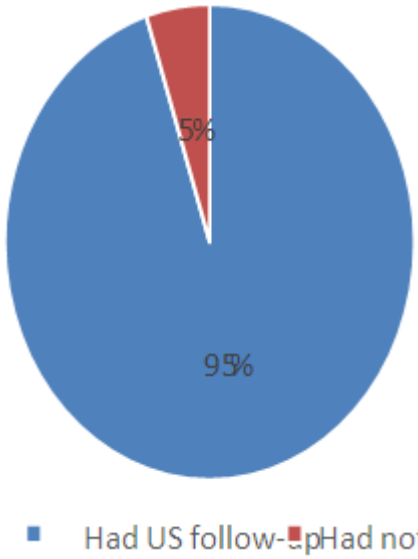


**Fig. 6 :** The ultrasound follow-up of the participants.

them had been pregnant more than 5 times (Fig. 2).

Concerning the abortion that the respondent had there were about 70% of them had 0 to 1 abortion; while 21.66% of them had 2-3 abortion and about 8.33% had more than 3 abortions (Fig. 3).

Concerning the type of abortion that the participants had whither it spontaneous or induced: there were about 26.66% had a spontaneous abortion; while about 73.33% of them had induced abortion (Fig. 4).

According to the method that the participants used for the abortion: there were about 66.66% had a medical abortion; while about 33.33% of them had a surgical abortion as shown in the Fig. 5.

Concerning the use of misoprostol to induce the abortion: there were about 63.33% had a complete abortion; while 36.66% had not. 61.66% of them used the misoprostol orally; while about 38.33% of them used it vaginally. Only 16.66% of them had side effect of misoprostol; while 83.33% had no side effect with misoprostol as shown in the Table 2.

Concerning the ultrasound follow up of the participants: there were 95% of them had a follow up; while about 5% of them had no follow up as shown in the Fig. 6.

The acceptability of misoprostol was 83%, while 17% not accept misoprostol as shown in Fig. 7.

The efficacy in this study was good efficacy in about 73% while poor efficacy was 27% in women, who treated with misoprostol as shown in Fig. 8.

## DISCUSSION

Assessment of efficacy rateof misoprostol in management of in complete abortion was the aim of this

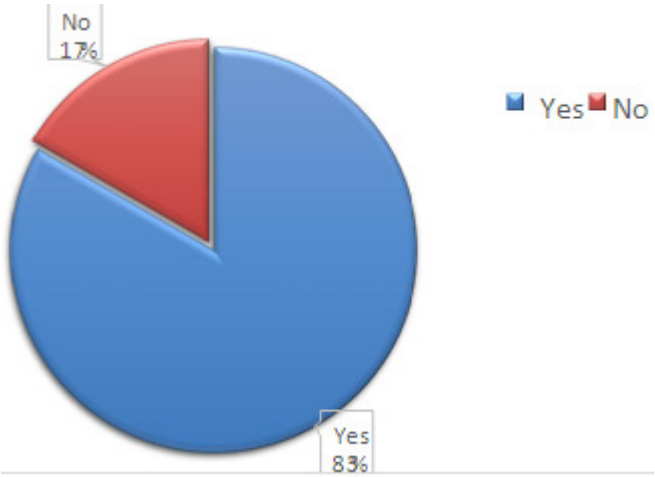


**Fig. 7 :** The acceptability of misoprostol.

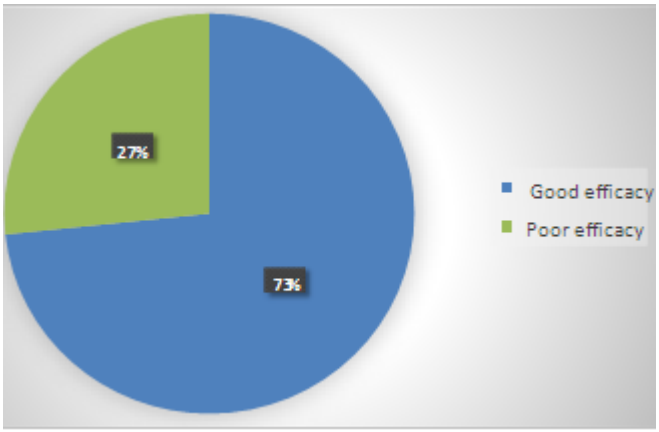


**Fig. 8 :** Efficacy of Misoprostol use in treatment of abortion.

study, as well as knowing the acceptability of misoprostol in women with incomplete abortion who attend Salah ALDIN general Hospital. The study found that 66.66% of women sample had a medical abortion by misoprostol while 33.33% of them had a surgical abortion with medical methods. Concerning the use of misoprostol to induce the abortion: there were about 63.33% had a complete abortion; while 36.66% had not. The route of misoprostol use differ in this study 61.66% of them used the misoprostol orally; while about 38.33% of them used it vaginally because most of the women prefer oral route as it easy andvaginal routeconsider invasive and not acceptable than oral use, this agree with study done in Vietnam in 2010 as it found that 400 mcg of misoprostol is highly effective in evacuation of the conception products (Bique *et al*, 2007). Misoprostol have good acceptability as surgical evacuation in treatment of incomplete abortion in compare with other studies. Decreasing or exchanging surgical evacuation of abortion with misoprostol as first line care could make anurses and nurse-midwives treat the abortion as well as the physicians (VSI, 2012).

This shifting in treatment, mainly in large hospitals, may decrease costs and ease jobs on physicians when there were heavy case loads. The elevated level of satisfaction and good tolerability of the adverse effects also attests to the ease of usage of this method. Now, misoprostol is used for evacuation of uterus in case of incomplete abortion in certain jurisdictions (WHO, 2012) and misoprostol consider as a drugof choicein life-saving of females (Fjerstad, 2006). Although, a many women who do ultrasound to confirmthe diagnosis of abortion, it does appear that its use was not necessary. Successful rate of treatment of this condition without ultrasound was high (Bique *et al*, 2007; ACOG, 2009). Really, only female who have symptoms like severe hemorrhage or signs of infection would require other treatment; however, ultrasound may needed to diagnose retained pieces that may be finally discharge by itself. Some doctors consider the ultrasound necessary to diagnose the chance of ectopic pregnancy occurrence, even when the subsection of incomplete abortion (ACOG, 2009).

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