

**Original article:**

**Interest of manual vacuum aspiration in the management of incomplete abortion at the district hospital of n'djamena south, chad**

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**Abstract**

**Background:** abortion is one of the main causes of maternal mortality and morbidity in Chad.

**Objective:** The aim of this work was to evaluate the interest of manual vacuum aspiration (MVA) in the management of incomplete abortion. **Methods:** This was a prospective and descriptive survey for five months from March 5<sup>th</sup> 2014 to August 05<sup>th</sup> 2014 conducted at the district hospital of N'Djamena South. All women admitted for incomplete abortion were included. Before including the patient in our investigation her consent should be gotten after some explanations on the necessity of the survey have been given. Data analysis has been done by EPI INFO 3.5.1.

**Results:** we enumerated 154 incomplete abortions among 2327 pregnancies registered at the prenatal consultation service and emergency unit. That gave the prevalence of 06.6%. The majorities of our patients had spontaneous abortion (96.1%). The time allowed for management was  $\leq 12$  hours (90.3%). No complication was observed **Conclusion:** MVA is an effective and sure method to evacuate uterus when incomplete abortion is diagnosed.

**Keywords:** Incomplete abortion; manual vacuum aspiration.

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**Introduction**

Abortions are frequent and represent the first cause of emergencies at the district hospital of N'djamena South. They are often complicated with incomplete abortion that can lead to maternal death when treatment lacked<sup>1</sup>. Beyond maternal death, incomplete abortions are responsible for a high maternal morbidity estimates to 10 -20%<sup>2</sup>. According to world health organization (WHO), incomplete abortions cause annually 87.000 maternal deaths in the developing countries due to incorrect treatment. WHO recommend the use of manual vacuum aspiration (MVA) for the improvement of obstetrical cares in Chad particularly at N'djamena<sup>3</sup>, the MVA was recently instituted in 2010 at the district hospital

of N'djamena South. Nowadays, it's practiced in four hospitals and some private health centers. Few prior studies showed the importance and the efficacy of MVA in order to vulgarize this method in Chad. Our study aims to show on the first hand the advantage of MVA, and in the second hand to promote the use of this method in the treatment of incomplete abortions.

**Methods and materials**

This was a prospective and descriptive survey for five months from March 5<sup>th</sup> 2014 to August 05<sup>th</sup> 2014 conducted at the district hospital of N'Djamena south.

All women admitted for incomplete abortion were included. Before including the patient in our

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investigation her consent should be gotten after some explanations on the necessity of the survey have been given. Patients who refused to participate at this survey and those with other diagnoses were excluded. The epidemiological variables, clinical data, and maternal prognosis have been collected on a card of investigation. The analysis of data had been made by EPI INFO 3.5.1.

### **Results**

#### **Prevalence**

During our survey we enumerated 154 incomplete abortions among 2327 pregnancies registered at the prenatal consultation service and emergency unit. That gave the prevalence of 06.6%.

#### **Abortion type**

In our series, 148 patients (96.1%) had a spontaneous abortion, and 6 patients did volunteer interruption of pregnancy (3.9%)

**Table I: Occurrence ‘period of abortion**

<b>Occurrence’ period</b>	<b>Effective</b>	<b>%</b>
1 <sup>st</sup> et 2 <sup>nd</sup> month	18	11.7
3 <sup>rd</sup> et 4 <sup>th</sup> month	104	67.5
5 <sup>th</sup> et 6 <sup>th</sup> month	32	20.8
<b>Total</b>	<b>154</b>	<b>100</b>

The majority of abortion (67.5%) occurred between the 3rd and the 4th month of pregnancy.

#### **Treatment by manual vacuum aspiration**

For all patients MVA was successfully realized (100%)

**Table II: Hospitalization’ duration after MVA procedure**

<b>Duration</b>	<b>Effective</b>	<b>%</b>
≤12h	139	90.3
13 – 24 h	13	08.4
More than 24h	02	01.3
<b>Total</b>	<b>154</b>	<b>100,0</b>

Hospitalization duration was ≤ 12 hours for 90.3%, but 01.3% suffering for anemia stayed more than 24 hours.

**Table III: Contraceptive method after MVA**

<b>Type de contraception</b>	<b>Effective</b>	<b>%</b>
Inject able	20	13
Implants	12	07.8
Pill	29	18.8
None (refused)	93	60.4
<b>Total</b>	<b>154</b>	<b>100</b>

More than the half (60.4%) refused contraceptive method after MVA.

#### **Maternal prognosis**

None complication was observed after MVA.

### **Discussion**

#### **Prevalence**

The prevalence of incomplete abortion was 6.6% in our series. Our prevalence is similar with those reported by Chene<sup>4</sup> and Belek<sup>5</sup>. Social reasons linked to politics of exemption from payment of cares can explained our proportion.

#### **Abortion type**

Like some authors<sup>6-8</sup>, we reported more spontaneous abortion (96.1%). Therefore 09.4% did volunteer interruption of pregnancy. Shewkerela<sup>9</sup> observed more provoked abortion than us. These differences should be explained by the fact that the majority of women hide the truth. In our country, voluntary interruptions of pregnancy are forbidden by the law. In the aim of protection, women often hide the type of abortion.

Hospitalization ‘duration was ≤12 hours for the majority of patients (90.3%). Our proportion is like those reported by Cisse<sup>6</sup> and Kissa<sup>10</sup>. The reduction of hospitalization ‘duration constitutes advantage for family, reducing medical fees.

None complication linked with MVA was observed. Cisse<sup>6</sup> on one hand reported a similar proportion, some authors<sup>4,5,11</sup> on the second hand observed complication in the range of 1-5%. Like these authors, we agree that MVA procedure is not exempt of complication, but experienced hand is the best way to avoid it.

MVA was conducted with efficiency (100%). Our result is like those of numerous authors in the literature<sup>6, 12-13</sup>. The efficiency of MVA showed the advantage this method in the treatment of incomplete abortions. Reduction of hospitalization’ duration and the complication’ lack are tangibles elements that

can explained more the benefit of this method. The systematic antibiotic' use after MVA was the best way to prevent infection. Many authors like Cisse<sup>6</sup> and Chene<sup>4</sup>claimed that antibiotic is preventing drug and must be used in all case.

After MVA, counseling was done, aiming to propose contraceptive method. Therefore 60.4% refused contraceptive methods. Contrary to our proportion, many African studies<sup>5, 14-15</sup> reported that many patients accepted contraceptive methods (between 52-77.2%). Previous reports in Chad estimated at 4.8% the proportion of women that use the contraceptive method<sup>16</sup>. Insufficiency of sensitization about the importance of contraceptive and cultural reasons can explained refusal proportion.

### **Conclusion**

MVA is an efficiency and sure method to evacuate

uterus when incomplete abortion is diagnosed. This method must be vulgarized in all health centers in Chad for the treatment of incomplete abortion in order to reduce the mortality and morbidity due to this affection.

### **Authors approval**

All authors approve the submission of this work.

### **Conflict of interest**

All authors have declared that there is no conflict of interest.

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