

# SUCTION BY NELTON CATHETER VERSUS SURGICAL CURETTAGE IN MANAGEMENT OF INCOMPLETE ABORTION

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## INTRODUCTION

Approximately 20 percent of pregnant women will have some bleeding before 20 weeks gestation, and roughly one half of these pregnancies will end in spontaneous abortion. Up to 20 percent of recognized pregnancies will end in miscarriage. However, when women were followed with serial serum human chorionic gonadotropin (hCG) measurements, the actual miscarriage rate was found to be 31 percent. Many pregnancies are lost spontaneously before a woman recognizes that she is pregnant, and the clinical signs of miscarriage are mistaken for a heavy or late menses. In the past, uterine evacuation often was performed with sharp curettage alone. However, studies show that the use of suction curettage is superior to the use of sharp curettage alone. Prompt surgical evacuation of the uterus has been recommended in the past because of the risk for infection and concerns about coagulation disorders that result from retained products of conception.

## Aim of the work

The aim of this study was to compare between vacuum suction curettage using flexible nelaton catheter and metallic surgical evacuation and curettage under ultrasound guidance in management of first trimester incomplete abortion.

## PATIENTS

This cross-sectional study was conducted on 400 patients diagnosed as cases of incomplete abortion at Elshatby university hospital's outpatient clinic and inpatient wards after signing their informed consent. The patients were divided into two groups at random: Group 1 was composed of 200 patients to whom vacuum suction curettage using nelton catheter will be done to evacuate the uterus. Group 2 was formed of 200 patients to whom metallic E&C will be done to evacuate the uterus.

## METHODS

All cases were subjected to the following:  
Preoperative hemoglobin was done to all patients.  
Curettage was performed under ultrasound guidance to make sure all remnants have been evacuated using a Mindray DP-20®  
If the evacuation in the first group is incomplete, metallic E&C was performed to complete the process of evacuation.  
Duration of the evacuation procedure was recorded in both groups in minutes.  
Postoperative hemoglobin was done to all patients 4 hours after the procedure.

## RESULTS

### Change in hemoglobin between the two groups

The vacuum suction group showed a statistically significant less change in hemoglobin levels with a mean of  $(0.39 \pm 0.27)$  g/dl compared to the metallic surgical group with a mean of  $(0.84 \pm 0.39)$  g/dl.

### Duration of evacuation

The vacuum suction group showed a statistically significant less duration of evacuation with a mean of  $(3.97 \pm 2.11)$  minutes compared to the metallic surgical group with a mean of  $(8.33 \pm 1.76)$  minutes.

Table (1):Comparison between the two studied groups according to change in hemoglobin

Change in Hemoglobin (g/dl)	Vacuum suction (n = 200)	Metallic surgical (n = 200)	U	p
Min. – Max.	0.0 – 1.80	0.30 – 2.80	4229.5*	<0.001*
Mean $\pm$ SD.	$0.39 \pm 0.27$	$0.84 \pm 0.39$		
Median (IQR)	0.35 (0.20 – 0.50)	0.70 (0.60 – 0.90)		

Table (2):Comparison between the two studied groups according to duration of evacuation

Duration of evacuation (min)	Vacuum suction (n = 200)	Metallic surgical (n = 200)	U	P
Min. – Max.	2.0 – 15.0	6.0 – 15.0	1981.50*	<0.001*
Mean $\pm$ SD.	$3.97 \pm 2.11$	$8.33 \pm 1.76$		
Median (IQR)	4.0 (3.0 – 5.0)	8.0 (7.0 – 10.0)		

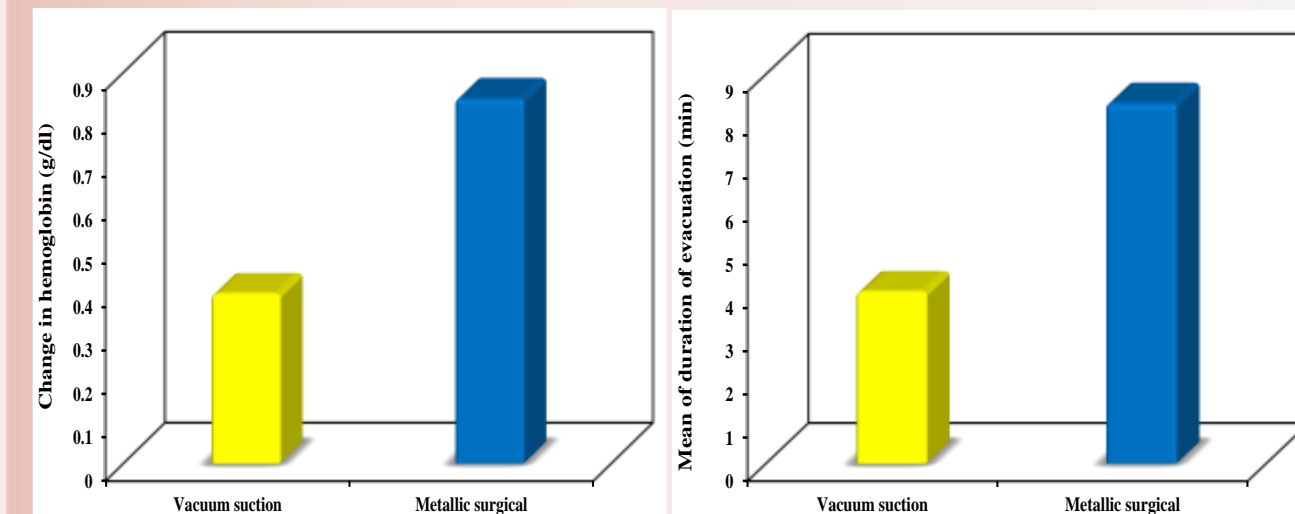


Figure (1):Comparison between the two studied groups according to change in hemoglobin

Figure (2):Comparison between the two studied groups according to duration of evacuation

## CONCLUSION

It is recommended to resort to suction curettage instead of metallic curettage as it has been shown to be significantly more effective due to:  
Minimal change in hemoglobin levels.  
Complications such as uterine perforation and bleeding are minimal.  
Less operative time was noted  
It is a safe, easily performed and possibly cost-effective procedure, with advantages for both the patient and the healthcare system.  
It could be considered routinely as an alternative option for the management of early pregnancy loss, thus increasing women's choice of available methods