

EP15.07 : Ultrasound-guided versus non-ultrasound-guided vacuum aspiration for first-trimester missed abortion and voluntary termination of pregnancy

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Objectives

To compare ultrasound-guided versus non-ultrasound-guided vacuum aspiration for first-trimester missed abortion and voluntary termination of pregnancy regarding completeness of uterine evacuation, perioperative complications, and need for repeat intervention.

Methods

A prospective comparative study was conducted at the Tunis Maternity and Neonatology Center, Service C, from January 2023 to December 2024.

Women undergoing manual vacuum aspiration with a Karman cannula without cervical dilation at twelve weeks of gestation or less were included.

Exclusion criteria were gestational age above twelve weeks, active hemorrhage, uterine malformation, coagulation disorders, or incomplete records.

Patients were assigned to an ultrasound-guided group (n = 142) or a non-guided group (n = 136).

Secondary outcomes included operative time, intraoperative complications, retained tissue, repeat aspiration, and post-procedural infection.

Results

A total of 278 women were included. Complete evacuation was higher in the ultrasound-guided group (96.5 percent versus 88.2 percent, $p = 0.01$). Repeat aspiration was reduced (3.5 percent versus 9.6 percent, $p = 0.03$). Operative time was slightly shorter with ultrasound guidance (6.8 versus 7.5 minutes, $p = 0.04$). Complications and infection rates were low and comparable. Benefits were more pronounced in retroverted uteri and gestational age above ten weeks.

Conclusion

Ultrasound guidance improves completeness of uterine evacuation and reduces repeat interventions without increasing complications. Its routine use is recommended to enhance safety and efficiency in first-trimester surgical management.