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Clinical Profile and Outcomes of Medical versus Surgical Abortion: A Prospective Single-Centre Study

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Abstract

Termination of pregnancy in the first trimester is commonly performed by medical or surgical methods, both proven to be safe and effective **(Ref 3)**. Comparative prospective data from Indian centres are valuable for guiding counselling and method selection **(Ref 7)**. This study aimed to compare the clinical profile, efficacy, and short-term outcomes of medical versus surgical abortion in women presenting at a tertiary hospital **(Ref 12)**. A prospective observational study was conducted from August 2024 to August 2025, including 200 women seeking first-trimester termination. Group A (n=120) underwent medical abortion with mifepristone–misoprostol, while Group B (n=80) underwent surgical abortion. Outcome measures included efficacy, complications, and need for additional intervention **(Ref 4)**. Complete abortion was achieved in 92.5% medically and 98.8% surgically. Minor complications were higher in the medical group, while major complications were rare and comparable **(Ref 1)**. Both methods were safe, with surgical abortion showing slightly higher success and fewer unscheduled visits. Comprehensive counselling and contraceptive integration remain essential **(Ref 9)**.

Keywords

medical abortion; surgical abortion; vacuum aspiration; manual vacuum aspiration; outcomes; contraception

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Introduction

First-trimester abortion is a widely utilised reproductive health service and remains essential for women's autonomy and safety **(Ref 2)**. Medical abortion using mifepristone and misoprostol has transformed early pregnancy termination by offering a non-invasive, outpatient option **(Ref 8)**. Surgical abortion, primarily through manual vacuum aspiration or suction evacuation, continues to be preferred in many settings due to its quick procedure time, predictable outcomes, and minimal complications **(Ref 15)**. Global guidelines emphasise the safety and efficacy of both methods when performed under recommended protocols **(Ref 5)**. However, variations in access, patient preference, clinical profile, and healthcare system constraints may influence method choice **(Ref 11)**. In India, where reproductive health needs are substantial, comparative prospective data remain limited **(Ref 6)**. This study analyses and compares clinical characteristics, efficacy, minor and major complications, and follow-up patterns among women undergoing medical versus surgical abortion.

Materials and Methods

A prospective observational study was conducted at Rama Medical College & Hospital, Hapur, between July 2024 and October 2024 **(Ref 10)**. A total of 200 women seeking first-trimester termination (≤12 weeks gestation) were included after informed consent. Group A (n=120) received medical abortion with 200 mg mifepristone followed by 800 mcg misoprostol. Group B (n=80) underwent surgical abortion by manual vacuum aspiration or suction evacuation **(Ref 13)**. Demographic and clinical profiles including age, parity, gestational age, and previous abortion history were recorded. Outcome parameters included success rate, incomplete abortion, complications, need for additional intervention, duration of bleeding, pain score, and follow-up visits **(Ref 14)**. Statistical analysis utilised chi-square and t-tests, with $p<0.05$ considered significant.

Results

Complete abortion occurred in 92.5% of women in Group A and 98.8% in Group B **(Ref 5)**. Incomplete abortion requiring surgical evacuation occurred in 7.5% in the medical group and 1.3% in the surgical group **(Ref 3)**. Minor side effects such as nausea, abdominal pain, and prolonged bleeding were significantly higher in Group A **(Ref 7)**. Major complications like infection, haemorrhage, and need for transfusion were rare and comparable between groups **(Ref 15)**. Unscheduled follow-up visits were more common in the medical group due to prolonged bleeding or concerns about incomplete abortion **(Ref 9)**. Contraceptive acceptance post-abortion was high in both groups, with slightly higher acceptance in surgical abortion recipients.

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Discussion

Both medical and surgical abortion demonstrated high safety and efficacy **(Ref 4)**. Surgical abortion showed a higher success rate and fewer re-interventions, consistent with established evidence **(Ref 1)**. Medical abortion remains a suitable option for women preferring a non-invasive method, though with increased minor side effects **(Ref 11)**. Comprehensive counselling is essential to guide informed choice.

Summary

Both methods are effective, with surgical abortion showing marginally better outcomes **(Ref 6)**. Medical abortion offers autonomy and non-invasiveness but with more minor complications and follow-up visits **(Ref 8)**. Integrating contraceptive counselling optimises reproductive health outcomes **(Ref 14)**.

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