ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 09 | September - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

COMPARISON OF CLINICO-SURGICAL OUTCOMES OF VAGINAL HYSTERECTOMY WITH OR WITHOUT HYDRODISSECTION

Obstetrics & Gynaecology

Dr Sunil K. Juneja Professor, Department of Obstetrics and Gynaecology, Dayanand Medical College and Hospital, Ludhiana, Punjab.

Dr Pooja Tandon Professor, Department of Obstetrics and Gynaecology, Dayanand Medical College and Hospital, Ludhiana, Punjab.

Dr Gurleen Sangha Ex MBBS , Dayanand Medical College and Hospital, Ludhiana, Punjab.

Dr Rooprishma Kaur* Assistant Professor, Department of Obstetrics and Gynaecology, Dayanand Medical College and Hospital, Ludhiana, Punjab. *Corresponding Author

ABSTRACT

Background: Vaginal hysterectomy is a cornerstone of gynecologic surgery, indicated primarily in women with uterovaginal prolapse and benign gynecological conditions such as abnormal uterine bleeding (AUB), fibroids, chronic pelvic inflammatory disease (PID), chronic cervicitis, and postmenopausal endometrial hyperplasia. This study compares the clinical and surgical outcomes of vaginal hysterectomy performed with and without hydrodissection. **Materials And Methods:** This retrospective study included 276 women undergoing vaginal hysterectomy over 10 years at Dayanand Medical College and Hospital, Ludhiana. Group A (n = 144) underwent hydrodissection-assisted vaginal hysterectomy, while Group B (n = 132) underwent the procedure without hydrodissection. Outcomes measured included operative time, blood loss, hemoglobin changes, postoperative febrile illness, and hospital stay duration. **Results:** Hydrodissection significantly reduced operative time, with 86% of Group A completing surgery within 40 minutes compared to 43.94% in Group B ($p < .001$). Blood loss was lower in Group A, with 68.06% losing <50 mL versus 21.21% in Group B ($p < .001$). Mean hemoglobin change was 0.756 ± 0.386 g/dL in Group A and 1.044 ± 0.525 g/dL in Group B ($p < .001$). Hospital stay was shorter in Group A (91.67% discharged within 3–4 days) compared to Group B (71.21%; $p < .001$). Postoperative febrile illness rates were comparable between groups. **Conclusion:** Hydrodissection improves the efficiency of vaginal hysterectomy by reducing operative time, minimizing intraoperative bleeding, limiting perioperative anemia, and shortening hospital stay, without increasing postoperative complications.

KEYWORDS

Vaginal hysterectomy, hydrodissection, blood loss, operative time, hospital stay

INTRODUCTION

Vaginal hysterectomy represents a hallmark of gynecological surgical expertise (Rock & Jones, 2008). Indications include uterovaginal prolapse, abnormal uterine bleeding (AUB), fibroids, chronic PID, chronic cervicitis, and postmenopausal endometrial hyperplasia. Non-descent vaginal hysterectomy is feasible in most benign cases.

Hydrodissection, achieved by infiltrating 100–120 mL of saline beneath the vaginal mucosa around the cervix, reduces intraoperative bleeding by creating a plane between tissues and providing mechanical tamponade of cervicovaginal vessels (Hurakadli et al., 2017). It has been suggested to make vaginal hysterectomy simpler, faster, and less bloody.

MATERIALS AND METHODS

This retrospective study included 276 women undergoing vaginal hysterectomy at Dayanand Medical College and Hospital over 10 years.

Groups:- Group A (n = 144): Hydrodissection-assisted vaginal hysterectomy. - Group B (n = 132): Standard vaginal hysterectomy without hydrodissection.

Inclusion Criteria: Uterine size <12 weeks, adequate uterine mobility, AUB, or prolapsed uterus.

Exclusion Criteria: Complex adnexal masses, prior ≥2 cesarean sections, gynecological malignancy.

Procedure: In Group A, 100–120 mL saline was infiltrated circumferentially beneath the vaginal mucosa below the bladder sulcus until blanching occurred. Group B underwent standard vaginal hysterectomy without hydrodissection.

Outcomes Measured: Age, indication for surgery, operative duration, blood loss, hemoglobin change, postoperative febrile illness, and hospital stay.

Ethical Considerations: Informed consent was obtained. Routine preoperative investigations included CBC, RBS, RFT, LFT, urine analysis, viral markers, chest X-ray, ECG, USG abdomen and pelvis, Pap smear, and D&C if required.

RESULTS

Age Distribution: Majority were 40–45 years (Group A: 75.69%, Group B: 81.06%; $p = .265$).

Operative Time: Hydrodissection reduced operative time significantly. Nearly 86% of Group A completed surgery within 40 minutes versus 43.94% in Group B ($p < .001$; Table 1).

Table 1: *Duration of Surgery*

Duration (min)	Group A (n=144)	%	Group B (n=132)	%	p-value
<30	10	6.94	3	2.27	<.001
30–35	46	31.94	13	9.85	
35–40	68	47.22	42	31.82	
>40	20	13.89	74	56.06	

Blood Loss & Hemoglobin Change: Significantly lower in Group A ($p < .001$; Table 2).

Table 2: *Blood Loss And Hemoglobin Change*

Variable	Group A (n=144)	%	Group B (n=132)	%	p-value
Blood Loss (mL)					
<50	98	68.06	28	21.21	<.001
50–100	20	13.89	24	18.18	
101–150	14	9.72	43	32.58	
151–200	6	4.17	28	21.21	
>200	6	4.17	9	6.82	
Change in Hb (g/dL)					<.001
<0.5	40	27.78	11	8.33	
0.6–1.0	84	58.33	82	62.12	
1.1–1.5	12	8.33	14	10.61	
1.6–2.0	8	5.56	18	13.64	
>2.0	0	0.00	7	5.30	
Mean Change	0.756 ± 0.386		1.044 ± 0.525		

Postoperative Febrile Illness: Low in both groups (Group A: 2.78%, Group B: 4.55%; $p = .965$).

Hospital Stay: Shorter in Group A (91.67% discharged in 3–4 days) versus Group B (71.21%; $p < .001$; Table 3).

Table 3: ***Hospital Stay***

Duration (days)	Group A (n=144)	%	Group B (n=132)	%	p-value
3–4	132	91.67	94	71.21	<.001
5–6	9	6.25	29	21.97	
≥7	3	2.08	9	6.82	

Indications For Surgery: AUB was the most common, followed by 3rd-degree prolapse and LSIL, with no significant difference between groups (p = .129).

DISCUSSION

Hydrodissection significantly reduced operative time, likely due to mechanical tamponade of cervicovaginal vessels and creation of a tissue plane before incision. Blood loss was markedly lower in Group A, consistent with findings by Hurakadli et al. (2017), Sayed et al. (2021), and Tripathi et al. (2015). Mean hemoglobin change was also lower in Group A, supporting reduced perioperative anemia (Yeasmin et al., 2019).

Postoperative complications were comparable between groups, and hydrodissection facilitated faster recovery and shorter hospital stay, improving patient satisfaction without increasing infection risk, consistent with the findings by Patil et al. (2016).

CONCLUSION

Hydrodissection enhances vaginal hysterectomy efficiency by reducing operative time, intraoperative bleeding, and perioperative anemia, while shortening hospital stay and improving patient satisfaction. The technique is safe, with postoperative outcomes comparable to standard procedures.

REFERENCES

1. Rock, J. A., & Jones, H. W. (2008). *Te Linde's operative gynecology* (10th ed.). Lippincott Williams & Wilkins.
2. Hurakadli, K. M., Pujari, L. L., & Prashant, G. (2017). A clinico-surgical outcome of vaginal hysterectomy with or without hydrodissection: A quasi-experimental study. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 7*(9), 3668–3672.
3. Sayed, S. P., & Dorairajan, G. (2021). Comparison of blood loss between saline infiltration and no infiltration dissection during vaginal prolapse surgery: Randomized controlled trial. *Journal of Gynecology Research and Obstetrics, 7*(2), 18–23.
4. Tripathi, U., Aggarwal, A., & Aggarwal, V. (2015). Effect of cervical vasopressin versus no cervical vasopressin on blood loss during vaginal hysterectomy. *Journal of Evolution of Medical and Dental Sciences, 4*, 6435–6442.
5. Yeasmin, S. F., Hasanat, M. A., Rahman, M. T., Islam, F., Akhtar, D., & Begum, A. (2019). Use of local infiltration and vasoconstrictors in vaginal surgery. *Mediscope, 6*(2), 49–52.
6. Patil, S. B., Saravana, A., Patil, S. S., & Shankaregowda, H. S. (2016). Nondescent vaginal hysterectomy: Analysis of indications and complications. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 5*, 2126–2129.