MedCrave
Step into the World of Research
Obstetrics & Gynecology International Journal

Research Article
Open Access
CrossMark

Effect of misoprostol before hysteroscopic polypectomy on Dilatation of the cervix and time of the procedure

Abstract

Introduction: Using misoprostol (analog prostaglandins E_1, PGE_1) prior to hysteroscopic intervention to induce ripening of cervix was implemented in gynecological problems management as submucosal myoma, endometrial polyps.[1,2]

Aim of study: The aim was to assess the effect of using misoprostol on easy dilatation of the cervix and on reducing the time needed for dilatation of cervix and the overall time needed for the procedure

Patients and methods: An observational cross sectional study was performed on women who were complaining from vaginal bleeding and diagnosed to have an endometrial polyp either received misoprostol or not prior to hysteroscopic myomectomy and were subjected to hysteroscopic polypectomy under general anesthesia.

Results: the time needed for cervical dilatation was more in the control group who did not receive misoprostol (P value >0.001).

Conclusion: The use of a regimen of 400 mcg vaginal misoprostol administered 6 hours before hysteroscopic polypectomy is a simple, safe and effective method of cervical priming to facilitate the procedure with less total operative time , less time needed for cervical dilatation and less complications (as cervical lacerations or false passage).

Keywords: misoprostol, hysteroscopic polypectomy, cervical dilatation, women

Volume 15 Issue 1 - 2024

Ahmed Hassan
Assistant professor of Obstetrics and Gynecology, Faculty of Medicine, Helwan University, Egypt

Correspondence: Ahmed Hassan, Assistant professor of Obstetrics and Gynecology, Faculty of Medicine, Helwan University, Egypt, Tel +966537019317, Email Dra7mad7asa@icloud.com

Received: February 12, 2024 | **Published:** February 26, 2024

Introduction

Using misoprostol (analog prostaglandins E_1, PGE_1) prior to hysteroscopic intervention to induce ripening of cervix was implemented in gynecological problems management as submucosal myoma, endometrial polyps.[1,2] sublingual, oral or vaginal routes of misoprostol intake were utilized .But till now it is not definitely proven what is the best route of misoprostol intake for cervical dilatation.

Misoprostol is comparable to laminaria to induce cervical ripening before operative hysteroscopy with lower time needed for cervical dilatation, easy intake, low costs and increased patient convenience.[3] Two previous studies was performed to compare the effects of preoperative vaginal and oral misoprostol on cervical preparation before hysteroscopy.[4]

One research concluded that vaginal route was more effective than the oral route for preoperative priming of cervix in non-pregnant ladies, while the other research found no difference between the two lines of intake.[4,5]

Interestingly, the sublingual method was superior when compared to the oral and vaginal methods for inducing abortion. However, there have been no researches that compared sublingual route to the other intake methods in non-pregnant premenopausal ladies with gynecologic problems.[6–8]

Aim of study

The aim was to assess the effect of using misoprostol on easy dilatation of the cervix and on reducing the time needed for dilatation of cervix and the overall time needed for the procedure.

Patients and methods

Setting: Badr University Hospital.

Study design: An observational cross sectional study.

Study Population: Women who were complaining from vaginal bleeding and diagnosed to have an endometrial polyp that were subjected to hysteroscopic polypectomy under general anesthesia.

All ladies underwent a physical examination, gynecologic, obstetric and medical history were obtained.

Exclusion criteria are: allergy or contraindications to prostaglandins, genital infection, Endometrial lesions with suspected or ecto or endo cervical lesions that could change resistance of cervix, Patients that were not candidates for surgery, Post-menopausal women and Pregnant ladies.

Patients were divided into two groups into two groups women either received two vaginal misoprostol tablets 6 hours before the procedure (group 1) And (group 2) women who did not receive misoprostol before hysteroscopy.

Questions were asked to women about side effects of misoprostol prior to anesthesia. A rigid hysteroscope with a 5,0 mm outer sheath diameter and a 30 degree forward-oblique lens was used. The distention media was saline solution. Follow-up one day and one week post hysteroscopy was made.

The primary outcome measure in this study was the time needed for cervical dilatation up to Hegar number 8, the secondary outcome were the operative time, complications during cervical dilation and the hysteroscopy- and misoprostol-associated side effects.

Sample size justification

The required sample size has been calculated using PASS 2021 Power Analysis and Sample Size Software (2021). NCSS, LLC. Kaysville, Utah, USA, ncss.com/software/pass. With a sample size of 42 patients (21 patients each group), we were able to identify a 1.5 difference in VAS pain levels between the two research groups with a standard deviation of 2 and a power of 90%. Utilizing the Epi-Info statistical software tool, the sample size and power analysis were computed.

Results

In the present study , there was no statistically significant difference between the group of women received misoprostol and the control group who did not received misoprostol before hysteroscopy regarding age and BMI (P value 0.252 and 0.395) respectively.

There was no statistically significant difference between the group of women received misoprostol and the control group who did not received misoprostol before hysteroscopy regarding gravidity and parity P value 0.583 and 0.238 respectively (Table 1) (Table 2).

Table 1 Shows a comparison between both groups regarding baseline characteristics

	Misoprostol (45)	Control (46)	P-value
Age	29.40+6.29	30.89+6.05	0.252
BMI	26.83+4.05	27.57+4.15	0.395
Gravidity			0.583
0	9 (20%)	4 (8.7%)	
1	9 (20%)	9 (19.6%)	
2	13 (28.9%)	13 (28.4%)	
3	9 (20%)	10 (21.7%)	
4	4 (8.9%)	6 (13%)	
5	1 (2.2%)	2 (4.3%)	
6	0	2 (4.3%)	
Parity			0.238
0	10 (22.2%)	4 (8.7%)	
1	11 (24.5%)	10 (21.7%)	
2	12 (26.7%)	15 (32.6%)	
3	10 (22.2%)	9 (19.6%)	
4	2 (4.4%)	7 (15.2%)	
5	0	1 (2.2%)	

Table 2 Demonstrate a comparison between misoprostol and control group regarding time needed for cervical dilatation

	Misoprostol (45)	Control (46)	P-value
Dilatation time (sec)	92.20+9.44	112.52+9.55	>0.001

In the current study, the time needed for cervical dilatation was more in the control group who did not receive misoprostol (P value >0.001) (Table 3).

Table 3 Demonstrate a comparison between misoprostol and control group regarding total operative time

	Misoprostol (45)	Control (46)	P-value
Operative time (sec)	190.98+16.8	232.74+19.19	>0.001

In the current study, the time needed for hysteroscopy was more in the control group who did not receive misoprostol (P value >0.001) (Table 4).

Table 4 Shows the cervical laceration in both groups

Complication	Misoprostol (45)	Control (46)
Cervical lacerations	0	3
False passage	0	2

Moreover, in the current study, the rate of complications associated with cervical dilatation and hysteroscopy was noted in the control group only who did not used misoprostol before hysteroscopy.

Discussion

In the current study, the rate of complications was higher in the group of women who did not use misoprostol before hysteroscopy with more women had cervical lacerations or false passage during hysteroscopy, and this could be attributed to the role of misoprostol in cervical ripening and easier dilatation.

In agreement with our current study, a systematic review made in 2016 concluded that the use of misoprostol before hysteroscopy might help cervical dilatation and decrease complications of hysteroscopy (cervical laceration and false passage). On the other hand, the side effects of misoprostol were relatively mild and insignificant. Meta-analysis recommends for obstetricians that the regimen of 200 or 400 µg vaginal misoprostol may be optimal, especially prior to operative hysteroscopy.[9]

Moreover, in the present study, the cervical dilatation time needed was lower in women used misoprostol before hysteroscopy.

In agreement with our study, a recent randomized controlled study made in 2018, showed that the regimen of 200 mcg vaginal misoprostol administered 3 hours before diagnostic hysteroscopy is a simple, effective, and safe method of ripening of cervix to facilitate the procedure without anesthesia.[10]

In the current study the total operative time for hysteroscopy was lower in the group of women who used misoprostol before hysteroscopy than the group of women who did not receive it.

Another study made in 2022 revealed that the use of misoprostol before hysteroscopy revealed that the drug can aid in the procedure; however, this drug is not free from side-effects and higher complication rates. Also, misoprostol is a well-tolerated drug. We agree with most authors that there is a need for more researches to recognize the optimal dose, route of intake, and time misoprostol before the procedure.[11]

Conclusion

The use of a regimen of 400 mcg vaginal misoprostol administered 6 hours before hysteroscopic polypectomy is a simple, safe and effective method of cervical priming to facilitate the procedure with less total operative time, less time needed for cervical dilatation and less complications (as cervical lacerations or false passage).

Acknowledgments

None.

Funding

None.

Conflicts of interest

Author declares that there is no conflict of interest.

Citation: Hassan A. Effect of misoprostol before hysteroscopic polypectomy on Dilatation of the cervix and time of the procedure. *Obstet Gynecol Int J.* 2024;15(1):39–41. DOI: 10.15406/ogij.2024.15.00732

References

1. Crane JM, Healey S. Use of misoprostol before hysteroscopy: a systematic review. *J Obstet Gynaecol Can*. 2006;28(5):373–379.
2. Fiala C, Gemzell-Danielsson K, Tang OS, et al. Cervical priming with misoprostol prior to transcervical procedures. *Int J Gynaecol Obstet*. 2007;99(Suppl. 2):S168–S171.
3. Darwish AM, Ahmad AM, Mohammad AM. Cervical priming prior to operative hysteroscopy: a randomized comparison of laminaria versus misoprostol. *Hum Reprod*. 2004;19(10):2391–2394.
4. Batukan C, Ozgun MT, Ozcelik B, et al. Cervical ripening before operative hysteroscopy in premenopausal women: a randomized, double-blind, placebo-controlled comparison of vaginal and oral misoprostol. *Fertil Steril*. 2008;89(4):966–973.
5. Choksuchat C, Cheewadhanaraks S, Getpook C, et al. Misoprostol for cervical ripening in non-pregnant women: a randomized double-blind controlled trial of oral versus vaginal regimens. *Hum Reprod*. 2006;21(8):2167–2170.
6. Tang OS, Mok KH, Ho PC. A randomized study comparing the use of sublingual to vaginal misoprostol for pre-operative cervical priming prior to surgical termination of pregnancy in the first trimester. *Hum Reprod*. 2004;19(5):1101–1104.
7. Carbonell Esteve JL, Mari JM, Valero F, et al. Sublingual versus vaginal misoprostol (400 microg) for cervical priming in first-trimester abortion: a randomized trial. *Contraception*. 2006;74(4):328–333.
8. Aronsson A, Helstrom L, Gemzell-Danielsson K. Sublingual compared with oral misoprostol for cervical dilatation prior to vacuum aspiration: a randomized comparison. *Contraception*. 2004;69(2):165–169.
9. Hua Y, Zhang W, Hu X, et al. The use of misoprostol for cervical priming prior to hysteroscopy: a systematic review and analysis. *Drug Des Devel Ther*. 2016;10:2789–2801.
10. Amer MI, Faisal M, Younis AMN. Vaginal misoprostol for cervical priming before outpatient hysteroscopy: a randomized controlled trial. *The Egyptian Journal of Hospital Medicine*. 2018;72(6):4586–4592.
11. Inácio QAS, Troncon JK, Valério FP, et al. Misoprostol administration before hysteroscopy procedures– a retrospective analysis. *Rev Bras Ginecol Obstet*. 2022;44(12).

Citation: Hassan A. Effect of misoprostol before hysteroscopic polypectomy on Dilatation of the cervix and time of the procedure. *Obstet Gynecol Int J*. 2024;15(1):39–41. DOI: 10.15406/ogij.2024.15.00732