DOI: 10.7860/JCDR/2017/23396.9189

Case Report

Obstetrics and Gynaecology Section

Misoprostol Induced Convulsion- A Rare Side Effect of Misoprostol

NALINI SHARMA[1], RITUPARNA DAS[2], SANTA SINGH AHANTHEM[3], KALYANI REDDY[4]

ABSTRACT

Misoprostol, a synthetic prostaglandin E1 has wider application in obstetrics gynaecology. It has been recommended in the prophylaxis and treatment of Post Partum Haemorrhage (PPH) by Federation of Obstetrics and Gynaecology (FIGO), World Health Organisation (WHO) and American College of Obstetrics and Gynaecology (ACOG). It is a very safe drug associated with transient side-effects like fever, chills, nausea, vomiting, diarrhoea and abdominal pain. In the present case report patient had an unusual side effect of hyperpyrexia and convulsion after use of misoprostol for prophylaxis against PPH.

Keywords: Hyperpyrexia, Prostaglandin E1, Postparum haemorrhage

CASE REPORT

A 21-year-old primigravida at 39 weeks of gestation was admitted with labour pains. Her general examination findings including her BP (120/70 mmHg) was normal. Her medical history was insignificant. There was no history of diabetes, tuberculosis, hypertension, epilepsy or any other medical disorders. She was not on any medication. She had no history of trauma or fever. Abdominal examination revealed a term size live fetus in cephalic presentation.

Her routine investigations at the time of admission were within normal limits. Her blood group was A positive. HB 12.5 gm%, TLC 13000cu/mm, DLC N-81 L-12 M-4 E-3, Platelet count 2.8 lacs/cmm, RBS 78 mg/dl, Urea 22 mg/dl, Creatinine 0.8mg/dl, total bilirubin 0.5 mg/dl, SGOT 37 IU/l, SGPT 52 IU/l, Total protein 5.7 gm/dl, Na 139.2 mm/l, K+ 4.10 mm/l.

She delivered spontaneously and active management of third stage of labour was carried out. Additionally Tab Misoprostol 600mcg was given orally. After half an hour of delivery, patient developed severe headache, vomiting, irrelevant talk with high grade fever (temp 107°F) and rigours. Parenteral antipyretic, antiemetic were administered and cold sponging done. After another half an hour patient had three episodes of convulsions Infusion antipyretic (paracetamol) and anticonvulsant injection lorazepam 4 mg intravenously was given. After 15 minutes she had another convulsion, patient shifted to ICU and Phenytoin infusion 600 mg was given in fifteen minutes duration after that patients was put on injection phenytoin 100 mg intravenously thrice a day. Neurology opinion was taken and no neurological deficit was found. NCCT brain revealed no abnormality.

Patient was discharged on 4th postnatal day on tablet phenytoin 300 mg every night. On follow-up patient is doing well.

DISCUSSION

Misoprostol, a synthetic prostaglandin E1 analogue originally used for the treatment of NSAID induced peptic ulcer has found wider application in the field of obstetrics and gynaecology because of its uterotonic and cervical-maturation effects. It has been used for first and second trimester medical abortion, missed abortion, medical management of incomplete abortion, induction of labour, prevention and treatment of PPH and also cervical ripening prior to procedures like hysteroscopy, D&C, endometrial biopsy.

Misoprostol use have been recommended in the prophylaxis and treatment of PPH by FIGO and ACOG [1,2]. Misoprostol as compared to other oxytocics is inexpensive, easily available, has longer shelf life, does not need refrigeration, has lesser contraindication and can be easily administered. It is a very safe drug associated with transient, mild side-effects like fever, chills, nausea, vomiting, diarrhoea and abdominal pain [3]. Collective total daily doses of 1600 microgram have been tolerated with only mild gastrointestinal discomfort. Some uncommon side effects include stress urinary incontinence, erythema multiforme and delirium [4].

In misoprostol trials for the prevention and treatment of PPH, hyperpyrexia (41°C) has been reported following the administration of misoprostol [5-7]. As compared to other routes of administration, the higher maximum concentration of the sublingual administration has been associated with a higher incidence of side effects [6].

Pyrexia associated with use of misoprostol is due to hypothalamic adjustment. E2 prostaglandins (PGE2) act on Prostaglandin E3 (EP3) receptor and mainly responsible in pathophysiology of endogenous fever. It is not clear if PG E1 act differently from PGE2. It may be possible that misoprostol induced pyrexia mimics the PGE2 endogenous thermoregulation patterns, changing the hypothalamic adjustment in its upper segment and stimulating temperature elevation [6]. In animal studies, it has been revealed that misoprostol decrease the threshold for convulsions and incite convulsions with a sub convulsive dose of Pentilenetetrazol (PTZ) [8].

In the present case report patient had uncommon side effect of hyperpyrexia and convulsion developing after use of misoprostol for prophylaxis against PPH. However, timely management prevented any untoward consequences. Similar to the present case another case of seizures has been reported with the misoprostol use [5]. In another case misoprostol precipitated seizure in well controlled secondary epileptic patient [9].

CONCLUSION

Misoprostol has wider application in obstetrics and gynaecology. Although considered to be a very safe drug rare serious side effects of misoprostol like hyperpyrexia and convulsion should be kept in mind which if not managed timely may lead to morbidity or mortality.

REFERENCES

[1] FIGO Guidelines: Treatment of PPH with misoprostol,2012
[2] ACOG Practice Bulletin: Clinical management guidelines for obstetrician-gynaecologists. Postpartum haemorrhage. Obstet Gynaecol. 2006;108(4):1039-47.
[3] Goldberg AB, Greenberg MB, Darney PD. Misoprostol and pregnancy. N Engl J Med. 2001;344:38-47.
[4] Morton MR, Robbins ME. Delirium in an elderly woman possibly associated with administration of misoprostol. DICP. 1991;(25):133-34.
[5] Chong YS, Chua S, Arulkumaran S. severe hyperthermia following oral misoprostol in the immediate postpartum period. Obstet Gynaecol. 1997;90:703-04.
[6] Durocher J, Bynum J, Barrera G, Winikoff B. High fever following postpartum administration of sublingual misoprostol. BJOG. 2010;117:845-52.
[7] Gu Imezoglu AM, Villar J, Ngoc NTN, Piaggio G, Carroli G, Adetoro L, et al. WHO multicentric randomized trial of misoprostol in the management of the third stage of labour. Lancet. 2001;358:689-95.
[8] Medeiros F, Das C, Medeioros MA, Rao VS, Figueiredo EG. Effects of misoprostol in pentylenetetrazol-induced seizures in mice. Arg Neuropsiquiatr.1997;55:677.
[9] Mohanraj P, Garg P, Narasimalu DM. Misoprostol for termination of pregnancy-can it precipitate a seizure in a well controlled secondary epileptic tuberculoma patient? J Turkish-german Gynaecol Assoc. 2010;11:65-66.

PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Obstetrics and Gynaecology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.
2. Senior Resident, Department of Obstetrics and Gynaecology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.
3. Professor and Head, Department of Obstetrics and Gynaecology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.
4. Senior Resident, Department of Obstetrics and Gynaecology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Nalini Sharma,
Assistant Professor, Department of Obstetrics and Gynaecology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong-793018, Meghalaya, India.
E-mail: nalinisharma100@rediffmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Aug 08, 2016**
Date of Peer Review: **Nov 12, 2016**
Date of Acceptance: **Nov 17, 2016**
Date of Publishing: **Feb 01, 2017**