Revista da
ASSOCIAÇÃO MÉDICA BRASILEIRA
www.ramb.org.br

Original article

Misoprostol use under routine conditions for termination of pregnancies with intrauterine fetal death☆

Maria Isabel do Nascimento[a,*], *Alfredo de Almeida Cunha*[b], *Sandra Regina dos Santos Muri Oliveira*[a], *Glaucimara Gonzaga Nunes*[a], *Felipe Silva Alvarez*[a], *Eduardo Loyola Villas Bôas*[a]

[a] *Hospital Geral de Nova Iguaçu, Nova Iguaçu, RJ, Brazil*
[b] *Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil*

ARTICLE INFO

Article history:
Received 10 August 2012
Accepted 11 February 2013
Available online 11 July 2013

Keywords:
Misoprostol
Oxytocin
Labor induced
Delivery obstetric
Fetal death
Stillbirth

ABSTRACT

Objective: To analyze the misoprostol use in pregnancies with intrauterine fetal death (IUFD), considering mode of delivery and induction-delivery interval.
Methods: Descriptive study including 171 pregnant women with IUFD, in the second or third trimester, submitted to labor induction with vaginal misoprostol and/or induction/augmentation with intravenous oxytocin, from 2005 to 2008, at a teaching-hospital of the Brazilian Unified Health System (Sistema Único de Saúde - SUS).
Results: Misoprostol alone (treatment A), misoprostol plus oxytocin (treatment B), and oxytocin alone (treatment C) were administered in 9.3%, 19.9%, and 70.8% of the cases, respectively. One-third of pregnancies were less than 28 weeks, and 2.9% required a caesarean section. The percentage of vaginal delivery in treatments A and B combined (98.0%) was similar to treatment C (96.7%). The mean induction-delivery interval was 15.4 hours. Comparing multiple groups, the mean induction-delivery interval was significantly shorter in treatment A (20.1 hours) than in treatment B (33.3 hours), and was longer than in treatment C (9.7 hours). The majority (71%) of cases required a single administration of misoprostol, and the total dosage was lower in treatment A (mean: 98.4 μg) compared with treatment B (mean: 157.0 μg).
Conclusion: Misoprostol effectively contributed to delivery of IUFD by vaginal route assisted under routine conditions of a public health service in Brazil, demonstrating its importance in cases resistant to usual induction methods, and its availability in Brazilian public health services is recommended.

Uso de misoprostol na rotina para terminar gestações com feto morto

Palavras-chave:
Misoprostol

RESUMO

Objetivo: Descrever o uso de misoprostol em gestações com óbito fetal intraútero, considerando o tipo de parto e o intervalo indução-parto.

☆ Study conducted at the Obstetrics Department of Hospital Geral de Nova Iguaçu, Nova Iguaçu, RJ, Brazil.

* *Corresponding author.*
E-mail: ysamaria@uol.com.br (M.I. Nascimento).

0104-4230
http://dx.doi.org/10.1016/j.ramb.2013.02.005

Ocitocina
Trabalho de parto induzido
Parto obstétrico
Óbito fetal
Feto morto

Métodos: Estudo descritivo de 171 gestantes com óbito fetal intraútero, no segundo ou terceiro trimestres, submetidas à indução do parto com misoprostol vaginal ou aceleração do parto com ocitocina parenteral, de 2005 a 2008 em um hospital-escola do Sistema Único de Saúde (SUS) do Brasil.
Resultados: Misoprostol isolado (tratamento A), misoprostol complementado pela ocitocina (tratamento B) e ocitocina isolada (tratamento C) foram administrados em 9,3%, 19,9% e 70,8% dos casos, respectivamente. Um terço das gestações estavam com menos de 28 semanas e 2,9% delas requereram operação cesariana. O percentual de parto vaginal nos tratamentos A e B combinados (98,0%) foi similar ao tratamento C (96,7%). A média do intervalo indução-parto foi menor no tratamento A (20,15 horas; DP = 15,8 horas) comparado ao tratamento B (33,31 horas; DP = 29,6 horas) e a proporção de partos pela via vaginal ocorridos dentro de 48 horas foi de 100% (tratamento A), 96,7% (tratamento B) e 96,7% (tratamento C). A maioria dos casos (71%) tratados com misoprostol requereu uma única administração da droga e a média da dosagem total foi menor no tratamento A (média 98,4 μg) comparado ao tratamento B (média: 157,0 μg).
Conclusão: Misoprostol efetivamente contribuiu para a resolução de gestações com óbito fetal intraútero, mostrando a importância de sua aplicação em casos resistentes aos métodos usuais de indução e de sua disponibilização nos serviços públicos de saúde no Brasil.

Introduction

The effectiveness of misoprostol for labor induction has been widely demonstrated by several randomized controlled trials (RCTs),[1] but the absence of its registration for obstetrical and gynecological applications remains an important problem in most countries.[2] Currently, Brazil and Peru are the only Latin-American countries to make misoprostol officially licensed for reproductive health indications. In Brazil, misoprostol is approved for vaginal use, and the preparation is indicated in cases when it is necessary to induce labor in a full-term or near full-term pregnancy, to induce labor of retained dead fetus, or in the case of legal abortions.[3]

Despite official regulation by government, the irregular supply of misoprostol is still a barrier in Brazil, which might limit its access[4] and in turn lead health professionals to make difficult choices regarding the treatments to be administered and/or opt for a suboptimal amount of misoprostol.[5] Additionally, the use of misoprostol in the presence of a previous uterine scar[6] and/or previous caesarean section increases the risk of uterine rupture.[7]

As the lack of license for certain misoprostol obstetrical indications is not a problem in Brazil, experiences other than RCT may contribute to increase the understanding of the subject, especially if the focus is on medical labor induction practiced in low-resource environments. Thus, the objective of this study was to describe the use of misoprostol in pregnancies with intrauterine fetal death (IUFD), in the second or third trimester, regarding mode of delivery and induction-delivery interval.

Methods

This was a descriptive study carried out with pregnant women with IUFD who were submitted to medical labor induction from January of 2005 to December of 2008 at a teaching hospital of the Brazilian Unified Health System (Sistema Único de Saúde – SUS).

Study population

According to the Brazilian Mortality Information System, 410 singleton gestations with dead fetuses registered at the aforementioned hospital were over 499 g birth weight and/or $\geq$ 22 weeks of gestational age, and thus were eligible for this study. Initially a total of 219 women were excluded for the following reasons: postpartum admission (15), emergency C-section (98), spontaneous deliveries (104), or use of Foley catheter followed by a C-section (2). The inclusion criteria for medical labor induction and/or augmentation with medications was fulfilled by 191 pregnant women. Of these, 20 were also excluded for the following reasons: (i) eight cases of medical induction in simultaneous use of Foley catheter method; (ii) ten cases of clinical induction initiated when the fetus was still alive (one anencephalic, one unexplained death, and eight cases of chorioamnionitis); (iii) two cases of loss of information about fetal vitality at the beginning of induction. The current study comprised 171 patients who received medical treatment for labor induction with vaginal misoprostol or labor augmentation with intravenous oxytocin infusion.

The medical treatment for labor induction or labor augmentation to terminate IUFD pregnancies is routinely performed in this hospital with misoprostol and/or oxytocin. Misoprostol is indicated for unfavorable cervix considering length, position, dilation, and station, and is exclusively administered vaginally. A favorable or mature cervix is that with 2 cm of dilation, 80%effaced, soft, and in midposition, and with a fetal occiput at −1 station, with a prognosis of vaginal delivery;[8] otherwise, the cervix is classified as immature or unfavorable. When the cervix becomes favorable, the intravenous oxytocin infusion is performed to supplement previously administered misoprostol. In contrast, oxytocin