

Introduction

Misoprostol is a prostaglandin E1 analog that has been widely used as a uterotonic agent for second line treatment of postpartum hemorrhage due to uterine atony, and as first line treatment in resource-poor countries due to its heat stability and ease of administration. Its use as a second line agent when oxytocin is readily available has been challenged due to its significant side effect profile and questionable efficacy. We present a case of hyperthermia, encephalopathy, and lactic acidosis in the setting of buccal misoprostol administration resulting in unplanned ICU admission.

Case

Our patient is a 24 year old G1P0 at 40.1 weeks EGA who was admitted for induction of labor. Her labor was augmented with cervical foley balloon placement and intravenous oxytocin, and an epidural was placed. After 14 hours of labor an IUPC was placed. The patient developed a fever of 101 F and was administered antibiotics and acetaminophen for suspected chorioamnionitis. Cesarean delivery was ultimately performed after 2 hours of maternal pushing due to arrest of descent as well as fetal tachycardia with recurrent late decelerations.

After delivery of the fetus (Apgars 2/9), uterine atony and postpartum hemorrhage was noted, which was treated with continuous IV oxytocin infusion (30u/500mL), buccal misoprostol 800mcg, and tranexamic acid 1g. Approximately 15 minutes following the misoprostol administration the patient started to complain of nausea and feeling unwell which progressed to acute agitation. She also became tachycardic and rigorous, but was normothermic. Management included 100% supplemental O2 via face mask, placement of a second large bore IV and an arterial line, and anxiolysis with dexmedetomidine and midazolam. Upon arrival to the recovery room she became acutely hypoxic and facial edema was noted. There was concern for development of pulmonary edema as the patient was clenching her teeth tightly and obstructing her airway. She was placed on BiPap and given hydrocortisone, diphenhydramine, and famotidine. At that time her pH was 7.2, lactate 8, and CPK 400. The decision was made to admit her to ICU for encephalopathy, lactic acidosis, and airway watch. Upon arrival to the ICU, her temperature was 104 F. Overnight, her mental status and vitals normalized, and she was stepped down the following day. Blood cultures, tryptase, and complement levels were negative.

Discussion

Misoprostol has been widely used as a secondary agent for treatment of uterine atony, however this practice has been called into question due to its significant side effect profile and questionable efficacy when oxytocin is available. This case highlights the risks involved in misoprostol administered, including but not limited to anxiety, rigors, confusion, myalgias, bronchospasm, and in our case, unplanned ICU admission. Perhaps it is time to re-evaluate the use of this medication when oxytocin is readily available.

References

Jaffer 2022
Gibbins 2013
ACOG 2017