

Misoprostol versus oxytocin as prophylaxis against intraoperative and postoperative bleeding in cesarean section (Randomized Controlled Trial)

Thesis Submitted for partial fulfillment of the Master degree in
Obstetrics & Gynecology.

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مقارنه بين الميزوبرستول و الأوكسيتوسين للوقايه من النزيف فى الولاده القيصرية

رسالة مقدمة توطئة للحصول على درجة الماجستير فى أمراض
النساء و التوليد

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*Praise be to God almighty for the uncountable blessings I
was bestowed upon with;*

for the guidance,

the family,

the friends,

the knowledge,

the tutors,

the will to learn and help,

and above all the ability to.

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Introduction

Post Partum Hemorrhage

- ❖ Either 1ry or 2ry
- ❖ 1ry PPH occurring in the first 24 hours postpartum.
- ❖ 500 ml in normal labor or 1000ml in cesarean section.
- ❖ OR any amount of bleeding that would affect the patient's general condition.
- ❖ The (WHO) estimates that nearly more than **half million** women die from complications of pregnancy and childbirth every year, **25%** are due to severe bleeding of any cause occurring in the postpartum period.

Cesarean section:

Complications

1- Haemorrhage


6 % of deaths associated with cesarean section and an unknown proportion of operative morbidity.

2- Bowel damage

3- Urinary tract damage

4- Cesarean hysterectomy

The most common indication for cesarean hysterectomy is uncontrollable maternal haemorrhage.



Excessive blood loss, as estimated by a 10% drop in hematocrit postdelivery or by need for blood transfusion, occurs in approximately 6% of cesarean births.

A reduction of operative blood loss at cesarean section is beneficial to the patients; in terms of decreased postoperative morbidity and a decrease in risks associated with blood transfusions.

Prevention of Postpartum hemorrhage

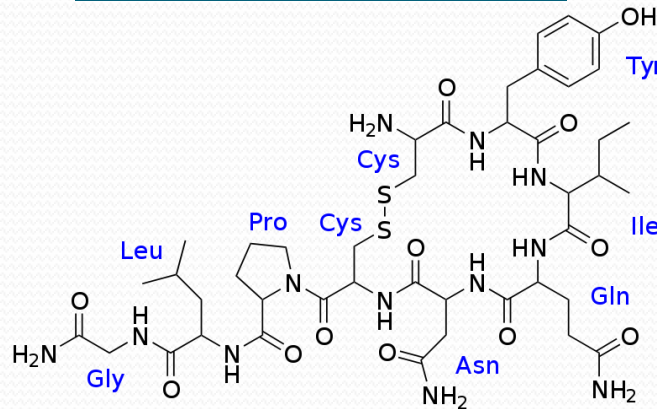
- ❖ Active management of the 3rd stage of labor,
- ❖ use of uterotonic agents,
- ❖ early cord clamping with controlled cord traction .

N.B.: Though our study wasn't concerned with management of PPH, it aimed at preventing PPH through minimizing blood loss as a part of the 3rd & 4th stages' active management .

Ecbolics

- ❖ Oxytocics. (e.g. Oxytocin)
- ❖ Prostaglandins. (e.g. Misoprostol)
- ❖ Ergot alkaloids.(e.g. Methergin).

Oxytocin



- ❖ Maternally derived oxytocin is a peptide hormone synthesized in hypothalamus and released from the posterior pituitary in a pulsatile fashion.
- ❖ Myometrial oxytocin receptors concentration increase on average of 100-200 folds during pregnancy, reaching a maximum during early labor

Pros and cons of Oxytocin

❖ Pros

- ❖ Fast onset of Action (30 sec.- 1min) after IV injection & (2min) after IM injection.
- ❖ Act directly through oxytocin receptor-mediated channels to promote uterine contractions.
- ❖ Act indirectly through stimulation of amniotic and decidua prostaglandin production to promote uterine contractions.

❖ Cons

- ❖ Short duration of action on discontinuation of injection (30 min).
- ❖ Unstable in light or in high temperature and therefore require refrigeration (but not freezing).
- ❖ Require parenteral administration.
- ❖ High dose oxytocin infusion (30 to 40m IU/min) have been associated with excessive fluid retention.
- ❖ IV bolus was also associated with significant and even fatal hypotension.