ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

ATOSIBAN IN THE MANAGEMENT OF PRETERM LABOUR : OUR EXPERIENCE.

KEY WORDS:

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ABSTRACT

Objective : To share our experience of the effectiveness of the oxytocin antagonist atosiban in the treatment of preterm labour.

Population : Patients diagnosed with preterm labour at 23-28 weeks of gestation

INTRODUCTION:

Preterm delivery is defined as birth before 37 weeks of pregnancy. It contrinutes to significant morbidity and mortality to the resulting babies, and emotional and financial costs to the parents. Neonatal uutcome is always directly proportional to the gestational age at which the delivery occurs.

Exact cause of preterm labour or threatened preterm labour can not be always predicted.[1] The causes could always vary with gestational age, cervical length, cervical incompetence and idiopathic.[2] In scenarios where the cause of the preterm labour is less understood, there is an enormous amount of research to determine the benefit of prolonging the pregnancy in spontaneous preterm labour using tocolytic medication.

Atosiban: Mechanism of action

Atosiban is a receptor antagonist for vasopressin V1a and oxytocin. It selectively acts on the uterus to suppress uterine contractions and premature delivery.

It binds to oxytocin receptors on the myometrium and prevents oxytocin-stimulated increase in inositol triphosphate production. This ultimately prevents release of stored calcium from the sarcoplasmic reticulum and subsequent opening of voltage gated calcium channels. This shutdown of cytosolic calcium increase prevents contractions of the uterine muscle, reducing the frequency of contractions and inducing uterine quiescence.

METHODS

We studied effectiveness of Atosiban in 10 of our in-patients all between the gestational age of 23-28 weeks and in preterm labour. Uterine activity was recorded using a tocometer in all 10 patients with preterm labour before, during and after treatment with Atosiban.

Atosiban was given as per the regimen by Zuventis i.e initial bolus of 6.75 mg followed by an infusion of 7.5mg/ml at rate of 24ml/hour for 3 hours and then 8ml/hour for another 45 hours. Uterine contraction, cervical dilatation and effacement were used to assess progression of labour.

Main outcome measures Tocolytic effectiveness was assessed in terms of the number of women undelivered after 48 hours or seven days and beyond.

RESULT :

There was a significant decrease in the uterine activity of all the 10 patients.

8 out of 10 pregnancies successfully reached full term,

1 out of 10 pregnancies had to be terminated because of doppler changes at 32 weeks.

1 out of 10 pregnancies delivered prematurely at 28 weeks.

CONCLUSION:

For patients in preterm or threatened preterm labour, the main motive for tocolysis is to allow benefit of the administration of steroids or transfer to a higher centre with NICU availability or to completely arrest preterm labour. In such difficult situations, most parents would be expected to accept the higher cost of the drug and inconvenience for the overall improved neonatal outcome and a lesser or no NICU stay. The cost of the drug outweighs the estimated financial cost of the prolonged stay in NICU.

In our experience Atosiban is an effective tocolytic and has economical advantage over NICU admissions.

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