

## ***Summary and conclusion***

Induction of labor is indicated in many clinical settings. It becomes difficult when the cervix is unfavorable.

Methods of induction include: mechanical methods, surgical methods and hormonal methods. Mechanical methods include: membrane-stripping, introducing osmotic dilator as laminaria tent, synthetic dilators as lamicel, dilapan, hypan and Foly's catheter. Surgical method includes amniotomy.

Hormonal methods include induction of labor either by relaxin, oestrogen, Mifepristone (RU486), corticosteroids, oxytocin, prostaglandins and prostaglandins analogue.

It was found that the most efficient and safe method of induction of labor is by prostaglandin.

In our work we tried to evaluate the safety and efficiency of Misoprostol (Cytotec-Searl England) which is a synthetic prostaglandin E<sub>1</sub> analogue used in treatment of gastropathy, as a method for induction of labor and termination of pregnancy in whom termination of pregnancy is indicated. The patients for whom work was done were 80 patients suffering from past date, hypertensive disorder with pregnancy, uncontrolled diabetes mellitus with pregnancy, Intra-uterine growth retardation, pre mature rupture of the

membrane and intrauterine fetal death. All patients were primigravidae, single tone of pregnancy and vertex presentation with no contraindications for induction.

Based on pre-prepared key these patients were randomly divided into 3 groups: the first included 22 patients started induction with 50 mcg Misoprostol, the second group included 20 patients started induction with 100 mcg Misoprostol and the third group included 38 patients started induction with placebo. In the placebo group as induction of labor was failed after 24 hours, they received either 50 or 100 mcg Misoprostol. 4 patients from the placebo group refused to continue and so the total number 76 patients.

Induction of labor succeed in 72 patients out of 76 and 4 patients failed to respond to the drug and delivered by Cesarean Section, 6 patients only didn't need more than 50 mcg Misoprostol, 64 patients needed 100 mcg Misoprostol as a total dose, 6 patients needed 200 mg Misoprostol.

As regard the 50-mcg group there was 2 patients complained of mild vomiting, which responded to mild antiemetic.

Misoprostol was able to change the mean Bishop score from  $5.3 \pm 2.732$  to  $10.6 \pm 1.366$  within 6 hours. Not a single baby showed signs of fetal distress. The one minute mean Apgar score was a  $7 \pm 1.154$ , and 5 minutes mean Apgar score was  $9 \pm 1.154$ . Four patients out of 6 patients delivered by

vacuum extraction due to fetal head malposition. The mean induction response time was  $53.33 \pm 10.327$  minutes, while the mean induction delivery time was  $466 \pm 46.699$  minutes.

As regard the 100-mcg group, there were 14 patients out of 64 patients complained from mild vomiting 6 hours of the use of the drug. One patient complained of diarrhea 12 hours of the use of the drug and 16 patients needed analgesia.

Misoprostol was able to change the mean Bishop score from  $3.75 \pm 1.727$  to  $12.5 \pm 0.516$  within 12 hours. The mean induction response time was  $58.43 \pm 13.727$  minutes, while the mean induction delivery time was  $680.68 \pm 103.59$  minutes.

14 patients showed meconium stained liquor after 6 hours and 6 patients showed blood stained liquor. Fetal tachycardia occurred in 20 patients and improved on changing the mother's position to the left and O<sub>2</sub> inhalation.

As regard the effect of the drug on uterine contraction 16 patient showed tachysystole.

Eight patients delivered by vacuum extraction due to fetal head malposition. The one minute mean apgar score was  $7 \pm 1.2$  and the 5 minutes

mean apgar score was  $9 \pm 1.143$ . Eight babies needed administration to the neonatal special care unit.

As regard the 200 mcg group, not a single complain of vomiting, diarrhea and pain. Misoprostol was able to change mean Bishop score from  $3.66 \pm 1.03$  to  $6.66 \pm 4.13$  in 12 hours in two patients who delivered vaginally.

Induction Failed in the other 4 patients who delivered by C.S.; the mean induction response time was  $103.3 \pm 33.86$  minutes, while the mean induction delivery time was  $1251 \pm 269.71$  minutes. Two patients showed blood stained liquor and another 2 patients showed tachysystol. The one-minute mean apgar score was  $5.3 \pm 1.36$ , while the 5 minutes mean apgar score was  $7.6 \pm 1.36$ .

In conclusion, Misoprostol is a cheap, easily stored with no need of refrigerator, safe and efficient for termination of pregnancy, provided that it is used by an expert obstetrician, in an equipped center and with a close monitoring of both mother and fetus.