SUMMARY AND CONCLUSION

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The uterine cervix is a unique organ composed predominantly of extracellular matrix proteins, collagen, elastin and glycosaminoglycans. During pregnancy and labor this organ is metabolically active. The metabolism is under reproductive hormonal control and is more complicated than was previously appreciated.

Cervical ripening is an active process involving remodeling of cervical tissue. This process can be induced pharmacologically in the first trimester to facilitate procedures such as surgical termination.

Preoperative cervical repining reduces the morbidity of surgical termination; including hemorrhage, incomplete uterine evacuation, uterine perforation and cervical trauma which may jeopardize the future fertility.

Various methods were tried for cervical ripening as the search for the ideal cervical ripening agent continues.

Nitric oxide is a free radical with a short half life. Animal studies have shown that NO is a fundamental mediator of the ripening process. Also, the NO generating system is present in rat cervix and is up regulated during labor at both term and preterm. Recent studies have shown that NO donors can induce cervical ripening before first trimester surgical termination.

So, this study tried to investigate the role of vaginally administered NO donor as a potentially beneficial drugs for the process of cervical ripening.

For this purpose the study included 60 patients who were admitted to Benha University Hospital from November 1999 to April 2000.

The study group included 60 patients; all of them in first trimester of pregnancy 30 of them primgravida (group A) while the other 30 were multgravida (group B) of pregnancy. They were scheduled to have termination of their pregnancy because of missed abortion.

Half of these patients were treated randomly by ISMN (NO donor) 40 mg vaginal tablet and the other half were also randomly treated by placebo vaginal tablet.

For all patients in group A (n = 30) and B (n = 30), measurement of the cervical canal diameter was done to be equal to the largest Hagar dilator that could be introduced with no difficulty both pretreatment and 3 hours post treatment (preoperative).

The results of this study indicate that there was a highly significant difference before and after treatment as regards the internal os diameter measured by Hegar dilator in both group.

The results of this study indicate that NO donor (ISMN) can provide a safe, cheap and effective cervical ripening agent before first trimesteric surgical evacuation.

From this study, the main side effect as regard ISMN was its hypotensive effect affecting mainly systolic blood pressure which didn't need any interference and also headache which was mild and self limited.

RECOMMENDATIONS

Nitric oxide donors could be used as a safe and cheap method for cervical ripening before termination of pregnancy in the first trimester.

The lack of uterotonic effect of use of nitric oxide donors provides a merit. So could be used in cases of grand multiparity or presence of uterine scars to ripen the cervix.