INTRODUCTION

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Missed abortion is defined as retention of the products of conception after death of the embryo.

During pregnancy the cervix, consisting mainly of connective tissue, remains firm and closed to ensure that the product of conception is retained intrauterine until term. By the end of pregnancy the cervix undergoes considerable preparatory changes at the anatomic and molecular level which results in its softening and shortening to allow the foetus to be safely delivered.

Pre-operative treatment with a primary agent, used to soften and dilate the cervix, has been shown to decrease morbidity associated with pregnancy termination including hemorhage, incomplete uterine evocuation, perforation and cervical trauma ***(Schultz et al., 1983 and Grimes et al., 1984).***

Cervical ripening is defined as an increase in the softening, distensability and effacment of the cervix, it is an active process involving remodeling of the cervical tissues and occurs independently of uterine contractions ***(Lepert, 1992).***

In human, cervical ripening is an inflammatory reaction accompanied by an infiltration of WBCs, remodeling of the extracellular matrix with marked oedema and considerable rearrangement of the collagen fibres ***(Junquiera et al., 1980).***

More recent studies demonstrate that cytokine such as (interleukin-8) play an important role during cervical ripening ***(Ito et al., 1992).***

Several methods and been used to induce cervical ripening there includes :

Natural methods as membrane stripping, breast stimulation, amniotomy, mechanical methods as mechanical osmatic dilators "laminaria tent - synthetic osmotic dilators lamical, dilapan" - extra-amnioic balloon with saline infusion, hormonal methods as Oxytocin by infusion - prostaglandin as vaginal tablets, prostaglandin analogue (misoprostol) as vaginal tablet and anti-progestens (mefipristone "RU 486" tablet) ***(Steiner and Creasy, 1983; Shirley and Williams, 1995).***

A new cervical ripening agents are nitric oxide donors. Nitric oxide is a free radical with short half life ***(Anggard, 1994).***

As the ideal cervical ripening agent is that one which induces cervical remodeling without stimulating uterine activity, nitric oxide donors are such agents as they relax the myometrium while inducing cervical ripening ***(Thomson et al., 1997).***

Mechanism of action of nitric oxide in the ripening process are via interactions either with prostaglandin biosynthesis or with lytic enzymes such as matrix metalloproteinases.

Nitric oxide is known to stimulate cyclooxygenase to increase the production of pro-inflammatory prostaglandins, also nitric oxide has been shown to stimulate matrix metalloproteinases which break down collagen ***(Ito et al., 1987).***

Animal studies have shown that nitric oxide is a fundamental mediators of the ripening process ***(Chwalisz et al., 1994).***

Thomson et al. (1997) reported the use of nitric oxide donor to ripe the cerivx for the first time before surgical evacuation of first trimester pregnancy used as vaginal tablet.