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Dilatation of the cervix with dinoprostone ('Prepidil Gel') prior to insertion of an intrauterine device: report of two cases

M.C. VAN DER GRIENDT and N.D. GOLDSTUCK

Department of Obstetrics and Gynaecology, University of the Witwatersrand, Johannesburg, South Africa

Abstract

Routine insertion of an intrauterine device (IUD) is usually a simple procedure in parous and nulliparous subjects. There is normally very little cervical resistance, depending on the type of IUD used.

We describe two cases in which cervical dilatation to allow passage of an IUD was facilitated by the intracervical insertion of 0.5 mg of PGE_2 gel. The use of PGE_2 gel in subjects where there appears to be marked cervical resistance at the level of the internal os probably allows safer introduction of the IUD using less force than after using analgesia to the cervix alone or a paracervical block. It is also faster and more convenient than using osmotic dilators. We recommend the use of 0.5 to 0.25 mg of PGE_2 gel inserted into the cervix about half an hour to two hours prior to attempting insertion of the intrauterine device in women in whom there appears to be an abnormally high resistance at the level of the internal cervical os. The method appears to be simple and physiologically acceptable.

Introduction

The routine insertion of intrauterine devices (IUD) throughout the past few decades has been performed predominantly in parous subjects. In these women the problem of overcoming resistance at the level of the internal cervical os is rare.

In nulliparous women and those who have been using combined oral contraceptives for some time, it may be difficult to pass an IUD because of resistance at the level of the internal cervical os. The passage of the device under these circumstances is usually accompanied by increased pain [1,2]. A number of approaches to inserting intrauterine devices in women in whom there is resistance to passage of the device have been tried, including the use of (i) intracervical and/or paracervical local anesthesia; (ii) osmotic dilators, e.g. Lamicel, laminaria tents; and (iii) systemically active uterine antispasmodics and antiprostaglandin analgesics. We

report here the use of intracervical application of prostaglandin E_2 (PGE_2) gel to effect cervical dilatation.

Case reports

Miss P.N.: Age 33, 0 + 0, presented at the clinic requesting insertion of an IUD. She was currently using a progestogen-only oral contraceptive pill (Microval), and had previously used the combined oral contraceptive (Triphasil). A previous attempt at inserting an intrauterine device using a paracervical block had failed. The paracervical block was performed because of the resistance of the internal os to passage of the device.

An attempt was made to insert an IUD by dilating the cervix with a 3 mm Lamicel. The Lamicel was inserted into the cervix up to the point of resistance at the internal os and the position was maintained by packing the vagina with gauze swabs. An attempt to pass the intrauterine device was made three hours later without success. She came to the clinic the following week and 3 g of sterile gel containing 0.5 mg of dinoprostone (PGE_2) was inserted into the cervix up against the internal os. She then remained in the dorsal position for half an hour. A further attempt to insert a Nova T was made and simultaneously the insertion force was measured [3] and found to be 5.2 newtons. About half an hour after insertion of the PGE_2 gel, the patient began to experience moderate uterine cramps and by the time the insertion was attempted she was experiencing fairly marked uterine cramping which she described as being similar to dysmenorrhea. This cramping continued for a further 10 hours. She was given anti-prostaglandin analgesics to counteract the pain, cramping and potential bleeding.

She was seen one week and three weeks after the insertion, at which time the device was found to be in place and the uterine cramping had virtually ceased.

Miss S.S.: Age 23, 0 + 0, had been using combined oral contraception for five years. She decided to change to intrauterine contraception. At her clinic visit for IUD fitting she was found to have severe cervicospasm. She was asked to come back one week later at the beginning of her menses.

The cervix would still not allow passage of a uterine sound or an IUD. Dinoprostone gel 0.5 mg was inserted into the cervical canal. A Copper-7 intrauterine device was then inserted easily with an insertion force of 3.1 newtons. She was seen one week later and the uterine cramping had stopped and the device appeared to be in place. She was then seen five weeks later and the uterine cramping had settled down completely.

Discussion

For many years various methods have been attempted to dilate both the pregnant and non-pregnant cervix. These include mechanical means such as cervical dilators, and osmotic dilators, e.g. Lamicel and laminaria tents. Similarly, a number of

pharmacologically active preparations have been used, e.g. oral and parenteral hormones such as progesterones, oxytocics and prostaglandins. These methods have all met with varying degrees of success, depending on a number of factors, including whether the patient is pregnant or not, parity, and other influences on the cervix. Prostaglandins have been used extensively to ripen the cervix in advanced stages of pregnancy and labor and to help dilate the cervix to enable the passage of surgical instruments during early pregnancy, e.g. for termination of pregnancy [4].

There is now a growing acceptance that IUDs can be inserted any time during the menstrual cycle, and the notion that inserting an intrauterine device during menses is easier has never been validated. Studies have shown that dilatation of the cervix prior to the passage of instruments reduces the force required for passage [5]. This, in turn, diminishes the likelihood of causing permanent damage to the cervix. Osmotic dilators take two hours or more to produce significant dilatation, while in the cases which we describe significant dilatation was achieved in half an hour. Furthermore, in non-pregnant women with marked cervicospasm, it is not possible to pass even a 3 mm osmotic dilator, and the dilator must be left in the cervical canal and the vagina packed to ensure that it is not extruded. The use of PGE_2 gel avoids the necessity for this and causes no discomfort to the patient when it is introduced into the cervical canal.

We conclude that PGE_2 gel can be used safely to dilate the cervical canal in non-pregnant women prior to the passage of intrauterine devices or other narrow gauge instruments into the uterus.

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Resumé

La mise en place de routine d'un dispositif intra-utérin (DIU) est normalement une opération simple chez les femmes mono, multi et nullipares. Le col de l'utérus n'offre en général que peu de résistance, quel que soit le type de DIU utilisé.

Nous avons décrit deux cas dans lesquels la dilatation du col pour permettre le passage du dispositif a

été facilitée par une infiltration intracervicale de 0.5 mg de gel PGE_2. L'utilisation du gel PGE_2 chez des sujets qui semblent présenter une résistance marquée du col au niveau de l'orifice interne permet sans doute d'introduire le DIU avec plus de sécurité et moins de force qu'après avoir appliqué un analgésique uniquement au niveau du col dans la région paracervicale. C'est aussi un procédé plus rapide et plus commode que d'utiliser des dilatateurs osmotiques. Nous recommandons de faire dans le col de l'utérus une infiltration de 0.5 à 0.25 mg de gel PGE_2 une demi-heure à 2 heures avant de tenter la mise en place d'un dispositif intra-utérin chez les femmes qui semblent présenter une résistance anormalement élevée au niveau de l'orifice cervical interne. Cette méthode apparaît simple et physiologique.

Resumen

La colocación rutinaria de dispositivos intrauterinos (DIU) suele ser un procedimiento simple en las mujeres mono, multi y nulíparas. El cuello del útero suele ofrecer poca resistencia, sea cual fuere el tipo de DIU utilizado.

Hemos descrito dos casos en los que la dilatación del cuello para permitir el paso del dispositivo fue facilitada por una infiltración intracervical de 0.5 mg de gel PGE_2. La utilización de gel PGE_2 en sujetos que parecen presentar una resistencia manifiesta del cuello a nivel del orificio interno permite probablement una introducción más segura del DIU usando menos fuerza que después de haber aplicado un analgésico únicamente a nivel del cuello o en la región paracervical. Asimismo, es un procedimiento más rápido y conveniente que el empleo de dilatadores osmóticos. Recomendamos hacer en el cuello uterino una infiltración de 0.5 a 0.25 mg de gel PGE_2 de media hora a 2 horas antes de intentar colocar un dispositivos intrauterino en las mujeres que parecen presentar una resistencia anormalmente elevada a nivel del orificio cervical interno. Este método parece ser simple y fisiológico.