

101926

Received: from woodpecker.mcs.muohio.edu (woodpecker.mcs.muohio.edu [134.53.6.70])
 by sigerson.sword.org (8.13.4/8.13.4/Debian-3) with ESMTTP id kAMEUql4016394
 for <requests@sword.org>; Wed, 22 Nov 2006 09:30:52 -0500

Received: from mulnx23.mcs.muohio.edu (mulnx23.mcs.muohio.edu [134.53.6.10])
 by woodpecker.mcs.muohio.edu (Switch-3.1.8/Switch-3.1.7) with ESMTTP id kAMEUENo003444
 for <requests@sword.org>; Wed, 22 Nov 2006 09:30:14 -0500

Received: from sms1.wright.edu (sms1.wright.edu [130.108.66.31])
 by mulnx23.mcs.muohio.edu (Switch-3.1.8/Switch-3.1.7) with SMTP id kAMEU6Ki004011
 for <requests@sword.org>; Wed, 22 Nov 2006 09:30:06 -0500

Received: from conversion-daemon.sms1.wright.edu by sms1.wright.edu
 (iPlanet Messaging Server 5.2 HotFix 2.09 (built Nov 18 2005))
 id <OJ9400J01YXNEJ@sms1.wright.edu>
 (original mail from fill@www.libraries.wright.edu)
 for requests@sword.org; Wed, 22 Nov 2006 09:29:58 -0500 (EST)

Received: from staff150 ([130.108.169.150])
 by sms1.wright.edu (iPlanet Messaging Server 5.2 HotFix 2.09 (built Nov 18
 2005)) with ESMTTP id <OJ9400KWDYXYG8@sms1.wright.edu> for requests@sword.org;
 Wed, 22 Nov 2006 09:29:58 -0500 (EST)

Date: Wed, 22 Nov 2006 14:29:57 +0000 (GMT)
 From: Fordham Interlibrary Loan <fill@www.libraries.wright.edu>
 Subject: Please fill request
 To: requests@sword.org
 Message-id: <251332121.455428812284344111@www.libraries.wright.edu>
 Content-transfer-encoding: 7BIT
 X-Real-ConnectIP: 130.108.66.31
 X-Scanned-By: MIMEDefang 2.57 on 134.53.6.70
 X-Scanned-By: MIMEDefang 2.52 on 134.53.6.10

This request has been forwarded from ILL by barb.

Please fill this request for FORDHAM HEALTH SCIENCES LIBRARY

101926

Call Number: 82008080111

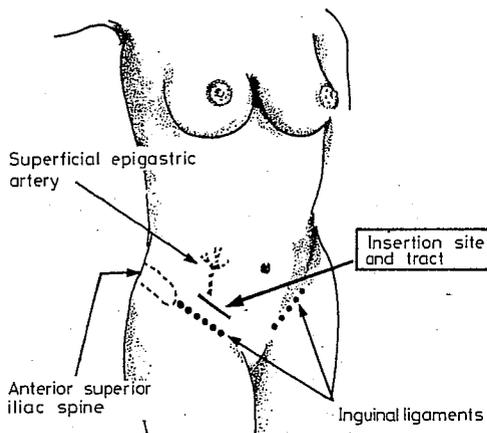
Journal Title: Br Med J
 Journal Vol: i
 Journal Issue:
 Journal Year: 1980
 Article Title: Hormone Implantation
 Article Author: Thom MH, Studd JWW
 Article Pages: 848-50

Customer Information:

Name: Glaser, Rebecca
 Status: Faculty
 Address: SOUTHVIEW (via Kettering Hosp),
 Site:
 E-Mail Address: rglaser@woh.rr.com
 Phone: 937-885-4555
 Department: School of Medicine

3 pages scanned
~~1052~~
 Kettering (551)
 11-22-06

HORMONE IMPLANTATION



The implantation of pellets of oestradiol into the fat of the abdominal wall or buttock has been used for 30 years, mainly to treat young patients who have undergone hysterectomy and bilateral oophorectomy. More recently its use has been extended to patients with an intact uterus, and potential complications of endometrial hyperplasia and heavy vaginal bleeding are avoided by adding a seven- to 13-day course of a progestogen each month.

Indications

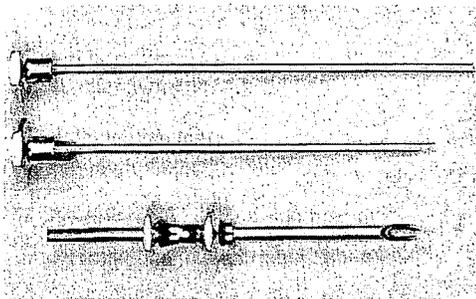
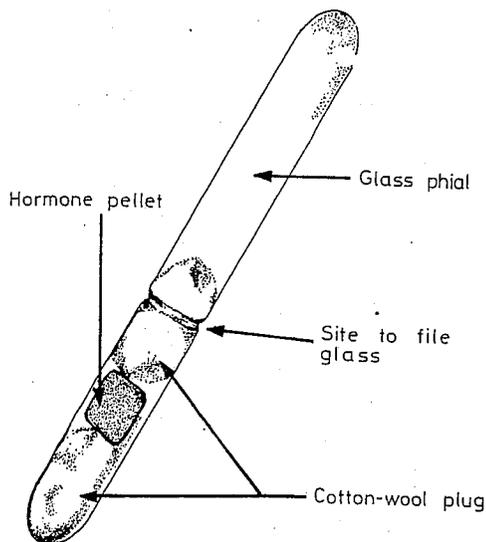
| Indications |
|----------------------------------|
| Symptoms of climacteric |
| No gonadal androgens |
| Contraindications |
| Endometrial and breast carcinoma |
| Deep vein thrombosis |
| Pulmonary embolus |
| Emotional instability |

Treatment of the climacteric—Subcutaneous hormone implants are principally used to treat the symptoms of the climacteric. When classic symptoms such as hot flushes, sweats, insomnia, vaginal dryness, and dyspareunia predominate a pellet of oestradiol 50 mg may be sufficient. Adding testosterone 100 mg to the oestradiol pellet, however, is effective in treating the related climacteric symptoms of loss of libido, lethargy, and depression. The sense of wellbeing induced by the anabolic effect of testosterone is considerable. There are obvious contraindications such as the presence or history of endometrial or breast carcinoma and a history of deep vein thrombosis or pulmonary embolus. It is also unwise to insert hormone pellets in emotionally unstable patients, who after implantation are apt to focus all anxieties on the pellets and request their removal soon after insertion.

Male hormone replacement—The rare patients with no gonadal androgen production—for example, after surgery—may be treated by implanting testosterone. A minimum of 1 g is required, necessitating the insertion of 10 pellets. Therefore, sufficient subcutaneous fat to accommodate these is an advantage. The possible hepatotoxic effects of the oral 17-alkylated androgen methyltestosterone are thus avoided.

Non-hormonal use in alcoholism—Pellets of disulfiram (Antabuse) are now available and may be implanted into patients suffering from alcoholism who cannot be relied on to take oral treatment consistently.

Procedure



Implantation is performed as an outpatient procedure during a routine clinic visit and never necessitates admission to hospital or general anaesthesia. A no-touch technique and sterile instruments are used. Scrubbing-up is not necessary.

The anterior abdominal wall, 5 cm above and parallel to the inguinal ligament, is the commonest site chosen for insertion. A small area of skin around the site is cleaned with iodine, spirit, or any antiseptic. About 2-5 ml of 1% lignocaine is drawn up and the skin and subcutaneous tissues of the insertion site infiltrated. During the minute or so required for effective anaesthesia the sterilised trocar and cannula may be assembled and the obturator placed alongside in a sterile dish ready for use.

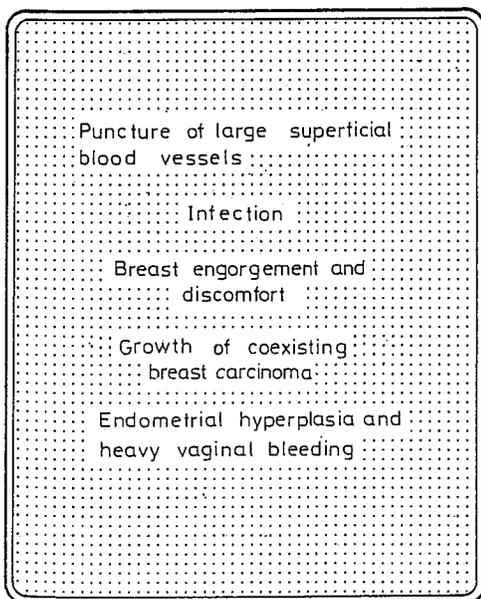
A file is used to scratch the glass phial containing the hormone pellet. The phial is broken, allowing the pellet to fall into a sterile gallipot. A sterile No 11 surgical blade, a pair of sterile forceps, some sterile cotton-wool, and two Band-Aids must also be at hand. The pointed blade is used to make a 4-5 mm incision in the skin over the insertion point. This incision does not have to be deep, as it is needed only to ease the passage of the pointed trocar and cannula through the firm skin. The trocar and cannula are then pushed through the incision as far as possible into the fat, avoiding the rectus sheath and muscle and any scar from previous surgery.

The trocar is withdrawn and the gallipot containing the pellets held under the cannula opening. The pellets are then placed in the cannula by using sterile forceps with the gallipot held under the cannula: in this way expensive pellets do not fall and become unsterile. The obturator is inserted into the cannula, forcing the pellets out of the instrument medial to the insertion site. Two cotton-wool balls are then placed over the insertion site and the tract as the obturator and cannula are simultaneously withdrawn. Slight pressure is kept on the cotton-wool for at least a minute by the operator, preventing any minor bleeding. The Band-Aid plasters are then placed over the wound. The patient is advised to keep the dressing dry for 48 hours.

When the buttock is chosen the site of insertion is that used for intramuscular injections but the tract is kept in the subcutaneous tissues.

Implantation of pellets will usually be repeated when symptoms return after six to nine months.

Complications



(1) Difficulty may be encountered in pushing the trocar and cannula through tough skin, and deepening the incision with a surgical blade may help.

(2) The site of insertion should be chosen to avoid any large superficial blood vessels.

(3) Haemostasis may be difficult to secure if a small vessel has been punctured. Prolonged manual pressure over the wound is required and, rarely, a stitch for a skin bleeder. Pressure over the tract prevents subsequent haematoma formation, but the patient will probably have an area of bruising around the wound the following day.

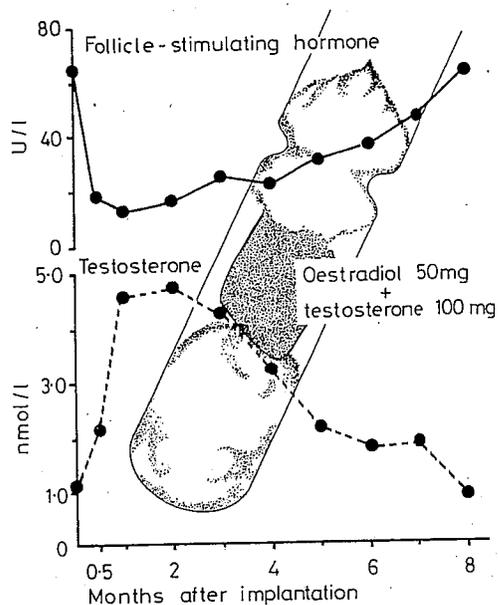
(4) Infection should be rare if a no-touch technique is adhered to. If it occurs the pellets may be extruded.

(5) Prolonged breast engorgement and discomfort are symptoms of oestrogen overdosage.

(6) Oestrogens may promote growth of a coexisting breast carcinoma. If breast carcinoma is diagnosed during the course of treatment it is advisable to remove the pellets.

(7) Endometrial hyperplasia and heavy vaginal bleeding may occur if the patient omits to take her seven to 13 days of progestogen each month.

Hormone profiles after implantation



The depression of plasma concentrations of follicle-stimulating hormone by the 50 mg of oestradiol used in treating the climacteric is dramatic and prolonged. The concentrations fall to premenopausal values of 15 IU/l within two weeks of implantation, where they remain for up to six months. The 50 mg oestradiol pellet causes mean plasma oestradiol concentrations of 320 pmol/l (87 pg/ml) and oestrone concentrations of 230 pmol/l (62 pg/ml) eight weeks after implantation. These are comparable with the concentrations found in the normal luteal phase of the cycle and may be contrasted with the abnormally high concentrations of oestrone found after oral oestrone or oestradiol treatment.

After implantation of 100 mg testosterone the plasma testosterone concentrations rise from 1 to 5 nmol/l (0.3 to 1.4 ng/ml) after six weeks, when the patient reports symptomatic improvement of energy and libido problems. Testosterone has no effect on plasma concentrations of follicle-stimulating hormone. Hirsutism is not a problem with the dose of testosterone used.

Prevention of hyperplasia



Implanting hormones in patients who have had a hysterectomy is straightforward, but there is a risk of endometrial hyperplasia if a regular course of progestogen is not taken by patients with a uterus. We prescribe seven to 13 days of a progestogen each month in the form of 5 mg norethisterone daily or 10 mg of medroxyprogesterone. It is convenient for this progestogen course to start on the first day of each calendar month, and bleeding occurs two days after taking the last tablet.

Patients may feel unpleasant symptoms of breast discomfort, depression, headaches, and bloatedness with the progestogen, and a few may omit taking this regular course in an attempt to avoid these symptoms or, misguidedly, to avoid having periods altogether. In these patients a period of amenorrhoea will be followed by heavy bleeding owing to hyperplasia. This should be investigated by curettage, and the hyperplasia may be corrected by two or three courses of progestogen for 21 days each month.

Dr Margaret H Thom, MRCOG, is a research senior registrar and Mr J W W Studd, MD, MRCOG, a consultant obstetrician and gynaecologist at King's College Hospital, London SE5.