

Dilatation of Cervix and Uterine Curettage (D&C)

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Usually referred to as the operation of D&C this is the commonest gynaecological operation. This involves two steps viz dilatation of cervix and curettage of the endometrium.

The following are the indications for dilatation of cervix-

1. Prior to -
 - a. uterine curettage
 - b. insertion of radium in the uterus
 - c. removal of intrauterine polyp
 - d. insertion of IUCD in nullipare (in some cases only)
 - e. insertion of laminaria tents.
 - f. insertion of hysteroscope with or without resectoscope
 - g. suction evacuation of the uterus.
 - h. cauterisation of the endocervix.
2. Spasmodic dysmenorrhoea resistant to conservative treatment
3. To drain hematometra or pyometra
4. Preliminary to amputation of the cervix

The following are the indications for uterine curettage

Diagnostic:

1. To study the pattern of the endometrium in menstrual problems like primary or secondary amenorrhoea, menorrhagia and infertility.
2. Suspected endometrial malignancy - carcinoma, choriocarcinoma, Sarcoma.
3. Suspected endometrial tuberculosis.

Therapeutic :

1. To stop prolonged, continuous uterine bleeding of dysfunctional type.
2. Voluntary termination of early pregnancy (suction

evacuation is preferred).

3. Check curettage after suction evacuation of the uterus.
4. Abortion - inevitable, incomplete or missed.

NOTE:

- A. In developed countries universal availability of sonography & hormone assays have eliminated the need of endometrial histopathology in most of the cases of infertility and amenorrhoea but in developing countries with prevalence of endometrial tuberculosis histopathology of the endometrium cannot be done away with.
- B. Many patients of dysfunctional uterine bleeding find relief for a variable number of cycles after D & C. This is difficult to explain since the disorder is of pituitary - ovarian origin. Similarly, some patients find unexplained relief from primary dysmenorrhoea after D & C.

Contraindications for D & C:

1. Possibility of wanted pregnancy.
2. Infection in the lower genital tract or in the pelvis. Whenever possible infection should be treated prior to D & C. However, a gentle uterine curettage is indicated in some cases of septic abortion.

Preoperative:

1. Patient should be starved overnight
2. An anxious patient should be given a sedative or a tranquilizer at bed time.
3. The pelvic hair should be shaved. (This is not mandatory. In developed countries this is not done).
4. Prophylactic antibiotic - When theatre asepsis is perfect - this is not necessary. However, usual practice is to give an antibiotic like cephalosporin intravenously 30 minutes prior to the surgery.
5. Premedication: Inj. atropine 0.6mg. is given intravenously 30 minutes before administering

anaesthesia. Alternatively it is given intravenously prior to giving the anaesthetic.

6. Patient should pass urine just before entering the operation theatre. Catheterisation of the bladder is always avoided by following this dictum.

Anaesthesia

Intravenous pentothal is the anaesthesia of choice. In very cooperative patients, esp. multiparae and in those where the cervix is already dilated (eg. in cases of inevitable or incomplete abortion) and in those whose medical condition renders general anaesthesia undesirable, the operation can be performed under sedation combined with paracervical block. Uterine curettage per se does not require any anaesthesia but cervical dilatation causes pain & needs anaesthesia - local or general. Paracervical block is achieved by injection 5 ml. of 0.5 or 1% xylocaine in the region of Frankenhauser's ganglion on either side. They are located lateral to the cervix 1.5 cm. above the lateral ends of the posterior fornix. Inadvertent injection in a blood vessel must be avoided by aspiration prior to injecting xylocaine - if blood is aspirated the needle should be partially withdrawn and repositioned. Catching the cervix with the vulsellum many produce discomfort in some patients which is avoided by a prior injection of 0.5 ml. xylocaine at the site of applying vulsellum while operating under local anaesthesia. It must be realised that lithotomy position causes discomfort to the patient and hence it is desirable to sedate the patient when operation is done under local anaesthesia.

Positioning the patient

A lithotomy position with patients buttocks protruding 10 cm. beyond the edge of the table is necessary. While giving lithotomy position both the lower limbs should be handled simultaneously.

Operative procedure

1. Perineum, vulva and vagina should be cleansed by a double application of local antiseptic like povidone iodine (Betadine) or cetrimide (Savlon) or chloroxylenol or Cetrimide (Dettol).
2. Drapes are employed leaving only the vulval region exposed.
3. A per vaginum examination must be carried out at this

stage to confirm the preoperative findings and assess the size of the uterus and utero cervical relationship viz anti or retroversion, anti or retroflexion.

4. A speculum is inserted in the vagina. Sim's speculum is the best. I prefer a single bladed Sim's speculum to avoid the outside blade of the Sim's speculum interfering with the operation when the patient's buttocks are not well beyond the edge of the operation table.
5. The cervix and the upper vagina are once again cleansed with antiseptic.
6. If the patient is being operated under local anaesthesia 0.5 ml of 0.5 or 1% xylocaine is injected submucosally in the anterior lip of the cervix. Two to three minutes must be allowed for its action.
7. Anterior lip of the cervix is caught with a vulsellum. A relatively least traumatic vulsellum should be employed. Alternatively, a long Alliss's forceps is used especially in a hypoplastic atrophic or pregnant uterus. Sometimes it is better to use two Alliss's forceps. Alternatively, a single tooth tenaculum can be used.
8. While operating under local anaesthesia 5 ml. of 0.5 or 1% xylocaine is injected through the lateral ends of the posterior fornix into the region of the Frankenhauser's ganglion (located lateral to the internal os posteriorly on either side). Aspiration prior to the injection ensures that the needle is not in a blood vessel. If blood is aspirated the needle is partially withdrawn and repositioned. Xylocaine is injected only after ensuring that the needle is not in a blood vessel by the aspiration test. Two minutes must be allowed for the action of xylocaine.
9. Traction is applied on the cervix to straighten the uterocervical canal to the extent possible.
10. Cervical canal is cleansed by antiseptic on a cotton tipped Playfair's probe.
11. A uterine sound is gently passed till the fundus of the uterus to find out the direction of the uterocervical canal and the lengths of the cervix and the uterine cavity. Normal length of the cervical canal is 2.5 cm and that of the uterine cavity 4cm.
12. The cervix is now dilated by graduated dilators. Hegar's dilators serially graduated in 0.5 mm thickness are the best. Metal dilators are most commonly used though plastic dilators are safer. When the uterus is

acutely anteflexed or retroflexed it is better to use Fenton's dilator. It is neither necessary nor advisable to dilate a non-pregnant cervix to more than 8 mm. Dilating the cervix to more than 10 mm may result in incompetency of the internal os. While doing MTP the cervix should be dilated 1 mm more than the size of the suction curette intended to be employed. The size of the suction curette in mm should be the same as the weeks of gestation. While dilating the cervix it is enough to insert the dilator just well beyond the internal os. A firm but steady pressure is exerted at the internal os by the dilator and the giving away of the resistance at the internal os indicates the passage of the dilator through it. The dilator should be grasped between the thumb and the index and middle fingers while the ring and little fingers are fully extended. The dilator is so grasped that when its tip reaches just well beyond the internal os the outstretched ring and little fingers hit the perineum and prevent the dilator from going further into the uterine cavity. The dilator is now left in situ for few seconds before withdrawing it and inserting the next one. The practice of repeatedly taking the dilator beyond and out of the internal os must be given up as this builds up intrauterine pressure pushing the cervicouterine contents into the Fallopian tubes potentially increasing the possibility of infection.

13. Once the cervix is adequately dilated one proceeds with curettage of the uterine cavity. In general a blunt curette is used for pregnant uterus while a sharp curette is used for nonpregnant uterus. A suction curette is used for MTP.
14. The curettage should be done systematically so as to remove the entire endometrial lining. The curetted material is collected over a gauze piece spread over the blade of the speculum. First the fundus is curetted, then the posterior wall followed by the anterior wall and the lateral walls. Special care must be taken to curette out the angles of the uterine cavity or the cornual areas. The aim is to remove the functional layer of the endometrium sparing the basal layer containing the tips of the endometrial gland. A peculiar grating is felt when this is achieved and further curetting of this area should now be stopped. When endometrial malignancy is suspected curettings

from the fundal area, upper uterine cavity and the lower uterine cavity are collected separately for histopathology. When endocervical malignancy is suspected the cervical canal is curetted and the material so obtained is sent separately for histopathology. The curetted material is sent for histopathology in 10% formalin. Endometrium meant for guinea pig inoculation in suspected cases of tuberculosis should be collected and sent in normal saline.

15. The vulsellum or Alliss's forceps is now removed. Cervix and upper vagina are cleansed with antiseptic solution.
16. Cervix is observed for about a minute for any bleeding. Bleeding from the vulsellum bite is stopped by applying pressure on that area with a swab held by a ring forceps. Sometimes a bit of the anterior tip of the cervix is torn off by the vulsellum and the area bleeds. This bleeding also stops on applying pressure. Very rarely a catgut stitch might have to be applied to control this bleeding. Cauterisation of the bleeding point is another alternative. Any bleeding from inside the cervical canal indicates incomplete curettage especially in a pregnant uterus. A recurettage should now be done to remove tissues missed earlier. Any persistent bleeding from the uterine cavity is dealt with by giving ergometrine, in case of pregnant uterus or prostaglandin in cases of non pregnant uterus. If ergometrine is not effective prostaglandin should be used. Ergometrine does not have any significant action on a nonpregnant uterus. In rare cases where the bleeding still cannot be controlled, then 1 to 1.5 cm. wide roller gauze, moistened by an antiseptic solution, using a uterine packing forceps is used. This pack should be removed after 8 to 12 hours.
17. After ensuring that there is no significant bleeding the speculum is removed and a sterile sanitary towel is applied over the vulva after cleaning the perineum of any blood.

Postoperative care

Patients pulse rate, blood pressure and respiration should be closely monitored and she should be observed for any bleeding for 2 hours. She can have liquid 3 hours after the operation done under general anaesthesia (earlier if

under local anaesthesia) and solids thereafter.

Hospital stay

The patient can be discharged from the hospital when she is able to walk without any support, generally 4-6 hours after the operation.

Instructions at discharge

1. No dietary restriction
2. Rest at home for 1 or 2 day,
3. No sex for one week.
4. Follow up visit after one week, earlier if fever, bleeding or pain.

Complications

Immediate

1. Uterine perforation - whenever uterine sound, cervical dilator or uterine curette gets inserted beyond the cervicouterine length, generally after getting a feeling of giving way of the resistance of the uterine wall, uterine perforation should be suspected. Too much lateral mobility of the instrument also suggests uterine perforation since normally the uterine walls restrict the mobility. The instrument should be withdrawn. No attempt should be made to confirm the perforation by reinserting the instrument. The operation should be stopped at this stage except when the patient is bleeding and curettage has to be done to stop the bleeding as in a case of incomplete abortion. In such a case the operation can be continued and completed with due care preferably under laproscopic control. In cases where laproscopic sterilisation is planned concurrently with D & C or MTP the procedure could easily be completed under laproscopic control. In all other cases the operation is abandoned and the patient kept under observation for 24 hours and closely monitored for internal bleeding and bowel injury.

Bowel injury should be looked for when perforation has been caused by the curette. In case internal haemorrhage occurs as indicated by tachycardia and falling blood pressure or signs of perforative peritonitis develop viz abdominal distention, tenderness, rigidity and absence of peristalsis, laparotomy will have to be undertaken. Sonography can pick up intraperitoneal bleeding or haemorrhage into the broad ligament which may occur when lateral wall of the uterus is perforated. An expert laproscopist may be able to handle the problems laproscopically in selected cases. If nothing eventful occurs during 24-48 hours of observation the patient should be discharged. No intrauterine procedure should be undertaken during the next 3 months by which time the uterine perforation heals well.

2. Haemorrhage - This is already discussed above under operative procedure.
3. Infection - This is indicated by pain, fever and tenderness on vaginal examination. This is treated by giving antibiotics.

Delayed

1. Asherman's syndrome - This is caused by vigorous and excessive curettage resulting in removal of the basal layer of the endometrium. It can also result from injection causing severe endometritis. The patient develops amenorrhoea. Diagnosis is done by hystero-graphy or hysteroscopy. Hysteroscopic resection of the intrauterine adhesions is the treatment of choice.
2. Incompetent cervix - This results from forcible and or excessive dilation of the cervix. While dilating the cervix a firm but steady pressure should be exerted on the internal or by the dilator. A non-pregnant cervix should not be dilated beyond 8mm. A pregnant cervix should not be dilated more than the minimum required.
3. Blocked Fallopian tubes as a result of infection.