Circumcision

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Circumcision is the commonest surgical operation in males and has been performed since time immemorial. It is obligatory in the Jewish religion, and has to be performed, by a priest, within the first week of life. All muslim boys have to be circumcised, as well, before puberty.

Indications

The pathological reasons for circumcision are:-

1. Recurrent Balanitis. Repeated infection of the foreskin can give rise to urinary tract infection. It can also lead to fibrosis and scarring and make the prepuce non-retractile causing difficulty in erection. Sometimes, severe Balanitis may result in oedema and virtual obliteration of the urinary stream in which case a dorsal slit is made as a first step.
2. Phimosis. The foreskin is tight in all neonates and gradually becomes retractile over the first few months. If thft does not occur and attempts to retract the foreskin fail, phimosis is diagnosed. Although a phimosis may be dilated gradually, circumcision is by far the better solution to this problem.
3. Paraphimosis. Somtimes the retracted foreskin forms a tight ring around the penis with resultant swelling of the glans distally. Heavy sedation, local anaesthesia, gentle squeezing of the glans between the fingers and thumb of the left hand and simultaneous gradual reduction of the prepuce with the right hand may be tried under local anaesthesia and heavy sedation. Alternatively a dorsal slit followed later by a circumcision or even an emergency circumcision may be performed.
4. Genital hygiene. Accummulated smegma is a potent cause of infection and has been incriminated in carcinoma of the cervix in the female.
5. Lesions on the foreskin angiomas and warts are good indications for circumcision.

Contraindications

1. Hypospadias. The spare skin on. the dorsum may be needed for surgical correction of the hypospadias and should not be sacrificed.
2. Epispadias. In this condition the ventral prepuce is preserved for surgical repair.
3. Buried penis. In fat babies, the penis lies buried in the mons pubis. After circumcision, very little penis is visible and may become a cause concern for the parents.
4. Dermatitis. In babies with recurrent nappy rash and dermatitis the prepuce protects the external urinary meatus from damage and eventual meatitis and meatal stenosis.
5. Haemophilia. Haemophilia and other bleeding disorders are a strong contraindication for circumcision unless factor viii or a suitable corrective factor is available. These babies should be admitted to hospital for circumcision and should remain under supervision until the bandage has separated and the wound healed.

Age most suitable. No age is a bar to circumcision. A good time may be after the baby is out of nappies and is toilet trained. However at this age general anaesthesia is necessary and this adds to the cost and risk involved.

Technically it is easier to circumcise within the first three months; general anaesthesia may be avoided and both baby as well as parents are less stressed as a result of the procedure. If the first weeks of life are not complicated by feeding problems and neonatal jaundice it may be convenient to do the

circumcision when the baby and the mother are already in the hospital.
Procedures. There are three standard and safe methods used for different age groups. Mild sedation is used for neonates and infants. An appropriate dose of phenergan given 20 minutes before surgery is satisfactory. A similar type of sedation with local anesthesia is used in older babies. In children at toddler age (2-5 years) and those likely, to be uncooperative general anaesthesia is preferred. In cooperative children five years or more of age, local anaesthesia may suffice, occasionally with a small dose of diazepam given orally prior to surgery.
1. The use of a bone cutter. This procedure is most suitable in neonates and infants. The object is to crush foreskin between the thin but blunt edged blades of the bone cutter, and to slice off the redundant foreskin, producing a clean out, avascular edge. The instruments required are (1) A bone cutter, (2) two curved and two straight mosquito forceps, (3) knife, (4) a pair of dissecting scissors and a stitch scissors, (5) needle holder, (6) sponge holding forceps, (7) dissecting forceps (8) a blunt probe, (9) a gallipot for savlon, (10) cotton wool and gauze pieces, (11) a suitable pair of gloves, (12) one surgical towel with a central hole, (13) plain catgut size 3/0, (14) adhesive plaster and (15) tincture benzoin.

Method

The baby is laid down supine on the table and strapped to it by means of adhesive plaster, brought over the lower end of the thighs (hips and knees extended). Thus kicking and movement of the baby will not disturb the surgeon. If G.A., is given (never in neonates and infants) strapping is necessary. Hand scrubbing, gloving, skin preparation and towelling are done as in any other surgical procedure. Gowns are not essential. The foreskin is retracted and adhesions between it and the glans are broken with the probe or the tip of a curved mosquito forceps. This gradually frees the foreskin which is then fully retracted. All smegma is removed. If the prepuce is tight, it is stretched prior to retraction, by passing the tip of a closed forceps into it and opening the jaws wide. Care should be taken not to pass the tip of the forceps into the meatus. Having cleaned the inside of the prepuce and its recesses, it is reduced back to normal position and then gripped with two mosquito forceps, one at six o'clock position and the other at 12 o'clock position. This converts the orifice into a slit. While the assistant holds the foreskin in this position without too much traction, the surgeon controls the glans under the prepuce with forefinger and thumb of the left hand. With the right hand, he holds the bone cutter, flat surface superior, and passes the open jaws of the instrument distal to the finger and thumb of the left hand, and gently closes the jaws. The bone cutter should be positioned slightly obliquely, keeping in mind the slight slant of the surface of the glans. The jaws thus closed are firmly held for three minutes, after which, with a sharp knife running over the flit surface Qf the bone cutter, the foreskin is sliced off. When the jaws are opened, the layers of foreskin .are found matted together. By applying gentle. traction on the skin, the glans is made to prótude completely. If no bleeding is encountered,. a. thin strip of cotton wool is wrapped around the skin edge and dabbed with tinc. benzoin and thus effectively sealed. No stitches are necessary. A vaseline gauze or sofratulle dressing may be preferred as the benzoin seal hurts when it dries up. The baby is made to sit in a sitz bath of lukewarm water 24 to 48 hours later. Gradually the dressing peals off, in three to five days. No routine antibiotic is necessary. Post operatively, suitable doses of Phenergan and Calpol may be needed once or twice. In older babies, it may be safer to catch and ligate or twice. In older babies, it may be safer to catch and ligate or suture the dorsal vein of penis and the frenal artery. If suture is needed it should only be with 3/0 or 4/0 plain catgut dependingon the age of the child. Two more stitches, at the 3 and 9 O'clock positions may keep the edges approximated.
2. Dissection method
This procedure is most suited for older children in whom the skin of the prepuce is thicker and difficult to crush. All the above instruments except the bone cutter are essential. After the prepuce has been

retracted, cleaned and reduced as in the first procedure, it is held in an artery forceps and a dorsal slit is made to exposethe glans. A suture taking both layers of the prepuce is inserted at the tip of slit, and tied. The dorsal vein of the penis is usually included in the suture. A similar slit is made ventrally and the tip of this slit is also sutured, with a mattress stitch which includes the frenular artery. Two flaps are now formed on either side of the glans which are trimmed off equally with a pair of scissors. In order to ensure uniformity equal traction is applied on the flaps with a dissecting forceps while trimming. Remember "Too little" can always be adjusted by further trimming but "too much" is difficult to compensate. These edges are then sutured with two to four stitches in all. The wound is dressed with tinc benzoin or sofratulle. There is no place for a pressure dressing here. It is unnecessary to change the dressing and it is best to have the dressing to peel off by itself. As a rule sufficient skin should be left behind to cover the proximal one third of the glans when the penis is flacid. In the beginning this may not be easy to achieve, but a slight excess of skin is no disability and adjustment occurs with age.

3. Use of Plastibel

Plastibel is a funnel shaped ring; shaped to accommodate the glans. An attached "handle helps to position the ring and is broken off at the end of the procedure. A grove on the proximal end accommodates the ligature used to crush the skin over the ring. The phtstibel is most suited for neonates and infants but is not so successful in older children. It falls off in 3 to 7 days taking with it the slouged loreskin and leaving behind a healed edge. Infection is never a problem. In older children the redundant fore skin does not fall off easily, and may have to be excised formally. I have therefore abandoned its use in older children. Results in neonates and infants are excellent.

Instruments needed: (1) Platibel of appropriate size, (2) 4 mosquito forceps, (3) 1 pair of scissors, (4) 1 gallipot for savlon solution, (5) gauze pieces and cotton wool balls, (6) surgical towel• with a central hole, (7) adhesive plaster.

Procedure

For neonates, size 1.1 and are used, depending on the girth of the glans. In a toddler, size 1.3 is more suitable while size 1 .5 is more suitable for an older child. However, size should be selected depending on girth of the glans rather than the age of the child. The prepuce Is prepared as before. A dorsal slit is made to facilitate insertion of the Plastibel which is made to lie over the glans. A silk thread that comes with the set is previously looped around the proposed site Of ligature with a knot ready to tie. After insertion of the Plastibel the ligature is tied firmly in the groove provided over the ring; so as to cause gangrene of the foreskin distally. After two more throws of the knot the excess silk is cutoff. The "handle" is then broken off with a twist. The redundant foreskin is then excised along the edge of the ring with a pair of scissors. At completion the glans lies protected by the ring, and the meatus peeps through the lower 1/4 of the circle. Micturation is not disturbed. One important point to remember here is that the ligature should be tied proximal to the dorsal slit. If the ligature is at the slit or distal to it there is danger of bleeding. Conversely the dorsal slit should not be made too deep. The baby can be dipered and bathed as usual. If one wants, one may remove the ring after 48 hours, but cutting the ligature. Gangrenous skin edges slough off in time, leaving a clean scar.

Follow up

The baby may be seen once, after the dressing has fallen off. Parents should be warned of possible complications, specially bleeding and advised to return at once should it occur. If tine benzoin is used, a yellowish discharge may occur which does not necessarily signify infection. Parents should be warned. With the use of a plastibel, there is usually some swelling around the ligature line as a result of traumatic inflammation. Reassurance is all that is required as the oedema settles down in less than five days.

Complications

1. Bleeding. Postcircumcision bleeding is by far the commonest problem, and could prove fatal. Any history of bleeding disorder should be thoroughly evaluated. Any neonate having circumcision in the first few days of life should have 1 mg of vitamin K given 24 hours prior to surgery. Jaundiced babies

should be put off until a few weeks after the jaundice has settled clinically and the liver function tests, prothrombin time and partialthromboplastlin test are normal. Tests need not be done if the jaundice was obviously physiological. The other important cause of postcircumcisional bleeding is Haemophilia. Haemophilics should either not be circumcised at all or should be done under strict haematological supervision. Faulty technique may also result in troublesome haemorrhage. The dorsal vein of penis and ventral frenal artery are the two notorious sources of haemorrhage and need to be crushed properly, ligated or transfixed in a suture. There is no place for a pressure bandage here.

2. Infection. Bad technique can result in bacterial infection which increases morbidity.

3. Unequal skin flaps. It is a mistake to excise too little skin. Redundant tags or flaps are unsightly and are a source of worry for the parents.

4. Damage to the glans. When the glans is not pushed proximal to the crushing line of the foreskin, it may get caught in the bone cutter blades and may be sliced off with the knife resulting in serious haemorrhage. In the long term stricture formation is inevitable with this injury.

5. Sliding of Plastibel over the glans. The Plastibel is a relatively safe equipment to use. Too large a Plastibel may slide over the glans during erection, producing a “constriction ring”. Too small a size may press on the glans producing oedema and ulceration. It may be stressed here that most of these complications are easily managed and, if tackled in time, have no long lasting effects.