

# Stitch granuloma of the penis: A very rare complication after male circumcision

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## Citation

Nadeem-ul-Nazeer, M Mohsin. *Stitch granuloma of the penis: A very rare complication after male circumcision*. The Internet Journal of Plastic Surgery. 2008 Volume 5 Number 2.

## Abstract

Surgical suture material is usually inert and nontoxic and causes minimal inflammation of tissue. It is not ordinarily a source of infection. Silk granuloma has been reported as benign complication seen after surgery elsewhere in the body. Suture granuloma can occur many months or years after the primary surgical procedure. The most common suture causing tissue irritation and subsequent granuloma is probably the silk (nonabsorbable suture) especially braided one. We report a granulomatous inflammatory tumour of penis in a fit two-year-old child. The lesion increased in size spontaneously within six weeks after circumcision. The child had symptoms of wound infection (i.e., pain, erythema, induration, and local tenderness with occasional seropurulent discharge) after closure of the circumcision wound with Vicryl suture material.

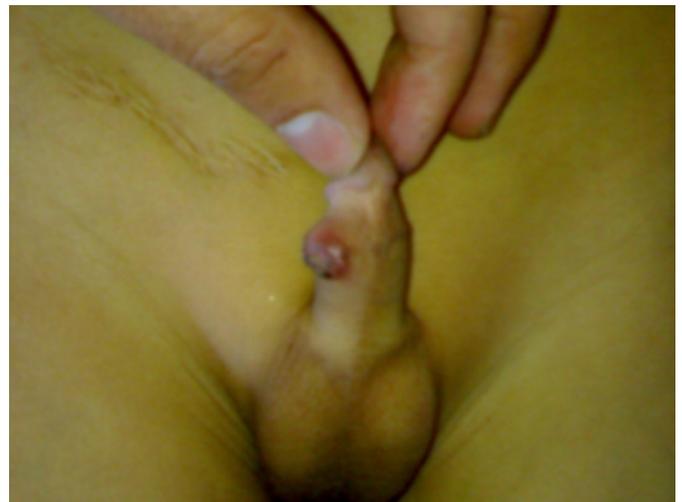
## CASE REPORT

A 2-year-old male child presented with a slowly growing occasionally painful swelling on the penis of six weeks duration. Interestingly, patient had undergone right herniotomy and circumcision (for religious reasons) two months back. On physical examination, the patient appeared to be in good overall health. The child had symptoms of local wound infection (i.e., occasional pain, erythema, induration, and local tenderness with occasional seropurulent discharge). Examination revealed a 0.8x1cm firm, tender swelling on the right lateral shaft of penis. The overlying skin was discoloured, indurated and the lesion was free from the underlying tissue. There was no inguinal adenopathy. Laboratory examinations were within normal limits except for mild leucocytosis and increased sedimentation rate (20 mm/hour). A diagnosis of stitch granuloma penis was made. Excision of the lesion was performed under anesthesia. The granuloma was excised in toto.

There was no cosmetic or functional deficit postoperatively and full unrestricted erection was possible (by manual stimulation). Histopathology revealed a thinly encapsulated granuloma, consisting of mainly chronic inflammatory cells and some necrosis with no evidence of malignancy. At 5 months follow-up, there was no recurrence and the patient continues to live normally.

## Figure 1

Figure 1: showing stitch granuloma penis-a very rare complication of circumcision.



## DISCUSSION

Male circumcision is the removal of some or all of the foreskin (prepuce) from the penis. The word "circumcision" comes from Latin circum (meaning "around") and caedere (meaning "to cut").

Early depictions of circumcision are found in cave drawings and Ancient Egyptian tombs, though some pictures may be open to interpretation. Male circumcision is a commandment from God in Judaism. In Islam, though not discussed in the Qur'an, circumcision is widely practiced and most often

considered to be a sunnah. It is also customary in some Christian churches in Africa, including some Oriental Orthodox Churches. According to the World Health Organization (WHO) <sup>18</sup>, global estimates suggest that 30% of males are circumcised, of whom 68% are Muslim. The prevalence of circumcision varies widely between cultures. In Western society circumcision is performed for medical reasons, the commonest of which is phimosis <sup>1,2,3</sup>. There is however, enormous variation between the circumcision rate in the UK (5-6 per cent <sup>1,4</sup>) and that in the USA (80-90 per cent <sup>5,6,7</sup>) Circumcision of male infants and children is controversial, with both advocates and opponents pointing to scientific evidence to support their positions. Advocates for circumcision state that it provides important health advantages which outweigh the risks, has no substantial effects on sexual function, has a low complication rate when carried out by an experienced physician, and is best performed during the neonatal period. Opponents of circumcision state that it is extremely painful, adversely affects sexual pleasure and performance, may increase the risk of certain infections, and when performed on infants and children violates the individual's human rights.

### **COMPLICATIONS OF CIRCUMCISION**

All medical procedures, especially those involving surgery, can and do result in complications. Circumcision is certainly no exception.

It is difficult to accurately document the precise rates of circumcision complications because some difficulties are either never reported or are never attributed to circumcision.

### **MEATAL ULCERATION**

Many infants and toddlers in diapers develop "urine burns" from contact with ammonia in urine-soaked diapers. The destruction of the foreskin creates an abnormal state in which the glans is exposed and in constant contact with outer clothing, and for the infant, with urine soaked diapers. Ammonia burns on the glans, especially around the meatus, can be a particularly troublesome problem for the circumcised male infant.

### **MEATAL STRICTURE**

Meatal stricture results from prolonged or repeated episodes of meatal ulceration. The repeatedly irritated meatus becomes narrowed. This results in pain and difficulty with urination. In extreme cases this can result in infections and kidney problems. The most common treatment for the condition is "meatotomy"—a snipping of the urinary meatus

to enlarge the opening.

### **HEMORRHAGE**

Hemorrhage is defined as excessive bleeding. It can result from any event that ruptures blood vessels, including any cut or surgical procedure. Hemorrhage is a fairly common complication of circumcision.

### **INFECTION**

Infection of the fresh circumcision wound has been a fairly common complication. Infection has occasionally been accompanied with disastrous results, including death. Any open area of skin is a potential avenue for infection. Because the freshly circumcised infant penis is in constant contact with wet and/or soiled diapers, this area cannot be kept sterile.

### **RETENTION OF PLASTIC BELL RING**

If a Plasti-bell device is used to circumcise a baby, the remaining foreskin should dry up and fall off with the ring within about 10 days after the operation. A complication peculiar to this device occurs when the ring fails to fall off and instead becomes buried under the skin along the shaft of the penis.

### **CONCEALED PENIS**

An unusual complication occurs when the penile shaft, following circumcision, retreats into the surrounding skin and fatty area and cannot be seen. This problem must be corrected by surgery, and often skin grafting, to produce a normal penis.

### **URETHRAL FISTULA**

A urethral fistula is a hole going from the side of the male urethra to the outside of the penis. Usually the fistula occurs on the underside. This can develop as a result of circumcision. It results either from accidental crushing of the urethra by the circumcision clamp, an abnormality in the urethra, or from a stitch placed in the underside of the penis to control excessive bleeding at the site of the frenulum.

### **PHIMOSIS OF REMAINING FORESKIN**

Phimosis refers to any condition in which the foreskin cannot be retracted. This condition is normal in the intact infant, and is not true phimosis. Occasionally the older intact male may have a tight foreskin that is difficult to retract. This condition can usually be resolved by simple methods, and does not need to be corrected by circumcision. One of the purported arguments in favor of routine neonatal

circumcision is that the operation will supposedly prevent phimosis. This is proven untrue, for occasionally the remaining piece of foreskin becomes tightly attached to the sides of the glans and the infant then must undergo a painful loosening procedure or possibly a second circumcision.

### **URINARY RETENTION**

Occasionally a baby will not urinate for several hours following circumcision. Sometimes the cause is an overly tight bandage wrapped around the wound. In other instances the cause is less clear.

### **GLANS NECROSIS**

Necrosis refers to the death of body tissue. This has happened to the glans following circumcision due to an overly tight bandage or a Plasti-bell ring that is too small.

### **INJURY AND LOSS OF GLANS**

Occasionally the glans can be injured or entirely cut off during circumcision. Usually a permanent deformity results.

### **EXCESSIVE SKIN LOSS**

Excessive skin loss can result from the operator severing too much foreskin, from infection of the wound resulting in tissue death, or from a burn caused by an electrocautery device. Sometimes the entire penile shaft becomes denuded and skin grafting is necessary. Other times the results are less drastic and the wound heals, but as the individual grows older his penile skin becomes too tight, causing discomfort on erection.

### **SKIN BRIDGE**

“Skin bridge” can result from circumcision. It is a complication in healing of the wound, by which a piece of skin from the shaft of the penis has become attached to the glans, or another point along the shaft, forming a “bridge” that must be surgically corrected.

### **SEWING OF PENILE SKIN TO THE GLANS**

Stitches are not normally required following neonatal circumcision, so presumably this bizarre complication has resulted from circumcision performed on older individuals.

### **LACERATION OF PENILE OR SCROTAL SKIN UNDETECTED HYPOSPADIAS**

Hypospadias is a congenital deformity in which a fistula naturally occurs in the underside of the penis. This is corrected by plastic surgery. The foreskin provides an easily available piece of tissue for use in skin grafting. (Thereafter,

the individual is essentially circumcised, but at least the foreskin has provided a correction for the defect.) If an infant with hypospadias is routinely circumcised, this potentially useful piece of skin has been destroyed and the operator must resort to more complicated types of skin grafts to reconstruct the penis.

### **PREPUTIAL CYSTS**

Occasionally cysts develop along the remaining edge of foreskin at the site where the skin was severed.

### **TUBERCULOSIS AND OTHER DISEASES FROM MEZIZAH**

Mezizah is the third step of the Jewish ritual circumcision ceremony, in which the mohel applies his mouth to the fresh circumcision wound. Diseases have been spread due to this practice. Today, few ritual circumcisors practice it.

### **KELOID FORMATION**

A keloid is an abnormal development consisting of a raised, firm, thickened, red piece of scar tissue. Such a formation at the site of circumcision creates a grotesque deformation of the organ, with obstruction of its function.

### **LYMPHEDEMA OR ELEPHANTIASIS OF SKIN**

These terms refer to the swelling or obstruction of the lymph vessels. This can result from circumcision

### **COSMETIC PROBLEMS**

Removal of only a tiny bit of foreskin can cause dissatisfaction on the part of parents who are conditioned to believe that the denuded state is preferable. Sometimes such parents will take their babies back to the doctor to have more foreskin cut off because they believe that his penis does not look circumcised enough.

### **COMPLICATIONS OF ANESTHESIA**

Complications can ensue from use of any type of anesthesia for any medical procedure, including circumcision.

Critics of infant circumcision frequently express outrage that newborn infants are usually given no anesthesia for an operation considered painful enough to warrant anesthesia for an older child or an adult. However, administration of such drugs to newborn infants is riskier than anesthetizing an older individual. Certainly if all newborn infants undergoing circumcision were being given general anesthesia for the operation we would see many more cases of death or difficulty from the anesthetic.

### **LOSS OF PENIS**

There have been cases in which the penis has been lost due to circumcision, caused by mishandling of the operation, as a result of an infection, or by a burn from electrocautery technique. In some cases enough penile shaft remained so that after extensive operations a functional penis could be reconstructed.

### **RARE COMPLICATIONS OF SUTURES**

Some of the problems associated with sutures have been:

**Granulomas (suture granulomas)** - This is a reaction to the stitches not dissolving as intended. It appears as bumps under the skin around the wound as your skin creates a tiny wall of scar tissue around the suture to separate it from the body.

**Spitting Sutures** - This occurs weeks to months after surgery if your body rejects the suture (again, from the stitches not absorbing as intended) and attempts to remove them by pushing the stitches out to the surface of the skin. Sutures that migrate in this way have been known to be the source of additional problems.

**Suture Abscess (commonly known as a stitch abscess)** - This is caused when the suture inhibits healthy tissue growth. This results in the appearance of miniature "mole tunnels" at or about the incision site where the sutures were used.

**Elevated Rate of Infection** - This occurs when bacteria enter the area around the suture and cause a small scale infection. This usually manifest as tenderness, redness of the skin, and pus around the suture. If left untreated, the infection may spread through the skin. Sutures have been documented to remain in the body causing infections well beyond the one (1) to two and half (2.5) years.

What are the contraindications to circumcision (the reasons against doing it)?

**Unstable or sick infant:** Circumcision is contraindicated if the baby is unstable or sick. Circumcision is elective surgery and, as with other medically elective procedures, it should be delayed until the baby is well. Signs of stability include normal feeding, waste elimination, and maintenance of normal body temperature without an incubator or radiant warmer. A period of observation after the infant's birth may allow for recognition of abnormalities or illnesses (for example, serious jaundice, infection, or manifest bleeding disorder) that should be addressed before this elective surgery.

**Prematurity:** It is usually best to wait until a premature infant meets the criteria for discharge from the hospital before performing circumcision.

**Genital anomalies:** Infants born with genital anomalies (including one called hypospadias) should not be circumcised. The foreskin may be needed for the surgical correction of the anomalies.

**Bleeding problems:** Whenever there is a family history of bleeding disorders, appropriate laboratory studies should be performed to make certain the baby himself has not inherited the bleeding disorder.

### **RECENT TREND**

Some authors present a technique during circumcision, using the carbon dioxide laser to excise the prepuce and weld the cut edges together, thus providing a completely bloodless operation. Suturing is optional as the laser can also be used to unite the cut edges. The technique allows exact proportions of skin and mucous membrane to be removed. In one study, this method was used in a total of 1,154 patients ranging in age from infancy to 10 years. A detailed analysis of postoperative recovery and follow-up indicated that minor complications occurred in only 4 patients, none of whom required hospital admission.

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