

CASE REPORT

Keloid and hypertrophic scar formation after male circumcision

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INTRODUCTION

Male circumcision is a surgical procedure for removing a part of the penile foreskin. Apart from several other reasons the procedure has cultural and religious importance.¹ The procedure has been proven to have health benefits also. A number of observational studies indicate that circumcised men have lower levels of HIV infection than uncircumcised men.² Postoperative complications are rare after circumcision. Ben Chaim and colleagues have reported on more than 19,000 circumcisions conducted on Israeli infants, of which only less than 1.5% suffered complications.³ The prevalence of complications of circumcision in North America has been reported to be less than 0.5%. However, the true prevalence of complications is not known as methods used to find out the rate of complications often underestimate the true prevalence.³⁻⁴ Complications such as Keloid formation, Hemorrhage, penile ischemia, shortening of the shaft skin, meatal stenosis, urethral fistulas, partial or total loss of phallus are the potential major complications of this procedure⁵⁻⁷ and hypertrophy of the scar have been observed in some cases. Keloid is formed by excessive deposition of collagen in the dermis and subcutaneous tissues secondary to traumatic

or surgical injuries. We present a case of a young male with an enlarged scar, itching, pain, and discomfort in the penis for 8 months after a routine circumcision procedure.

CASE REPORT

A 9 year old boy complaining of enlarged scar, itching and pain over the penis was admitted in the dermatology ward in our hospital in the state of Maharashtra, India. The caretaker of the boy reported that the boy went through a circumcision procedure 8 months back. There were no immediate post operative complications observed. He has no family history of Keloid and hypertrophic scar formation, and his past medical history is unremarkable. Upon physical examination, a circular shaped, erythematous keloid lesion around the coronal sulcus at the site of the circumcision was observed.

The lesion was excised for histopathological analysis. Histopathological reports of the excised lesion revealed irregular, thick, dense collagen bundles characteristic of Keloid. To prevent any further complications a urinary catheter was placed throughout the patient's stay in the hospital. Daily examination and change in the dressings of the wound helped decrease redness and swelling.

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Fig. 1 Showing hypertrophic scar following circumcision

Utmost care was taken to prevent post-operative infections. The patient was discharged from the hospital six days after the procedure, and was scheduled for regular follow up examinations. The wound was closed following sterile techniques. Additionally, steroid injections were administered locally. The sutures were removed and silicone gel sheets were applied to the wound. The sheet application was retained for 3 months. The patient was examined 3, 6 and 12 months after the procedure. The surgical site showed no further signs of keloid formation, hypertrophic scars, and any other signs of recurrence.

DISCUSSION

Male circumcision usually has a very low incidence of complications. Some common complications associated with circumcision are acute bleeding, wound infection, redundant foreskin, and meatal stenosis. Hypertrophy of the scar and keloid formation are some rare complications that have not been described adequately in literature. Keloids form as a result of fibro-collagenous proliferation. Glycosaminoglycans and collagen are responsible for increasing the fibroblastic activity. Activated mast cells also stimulate collagen synthesis. In

addition, endothelial cell proliferation may cause vessel occlusion which may lead to hypoxia. Hypoxia triggers revascularization which may aggravate collagen nodule formation processes. Some common locations for keloid formation are the presternal area of the chest, the upper arm, the shoulder and the earlobes. Different surgical and nonsurgical approaches have been employed in the past to treat keloids and hypertrophic scars. Therapies include surgical excision, laser therapy, compression therapy, radiotherapy, and intralesional corticosteroid injection. In conclusion, satisfactory results were obtained with excision of the tissue followed by running w-plasty combined with postoperative silicone application.

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