Penile keloids are rare presentations although the penis is subjected to frequent trauma of circumcision and repair of hypospadias and epispadias. A retrospective study of keloids and hypertrophic scars in our facility has revealed two cases of paediatric penile keloids in the 67 patients. A review of relevant literature has further buttress the rarity of the condition. This is a two year retrospective study of 67 patients who presented with 93 keloids managed in university of calabar teaching hospital from January 2012 to December 2013. Data were obtained from medical records unit, Wards and theatre records. The following information was retrieved: age, gender, cause of scar, latent period, site of the lesion, treatment modality and outcome. Out of 67 patients reviewed only two of them presented with penile keloids, representing 2.98%. They followed circumcision. They presented at the age of 13 months and 32 months. Penile keloid is a rare presentation among patients following trauma such as circumcision. A literature search revealed that in most of the cases reported the patients were teenagers and adults who had circumcision whereas our patients were less than 3 years of age.

**KEYWORDS:** Penile keloids, circumcision, paediatric.

**INTRODUCTION**

Penile keloids are rare presentation of keloid although the penis is subject to frequent trauma of circumcision and repair of congenital conditions such as hypospadias and epispadias. A review of literature revealed few reports of patients with penile keloids. Penile keloids have not been seen in our practice for over 10 years but the recent presentation of two cases within
one year called for concern. The classic definition of keloid is a scar tissue which progressively invade surrounding normal tissue, whereas hypertrophic scar is scar tissue which remains confined to the area of tissue damaged by the initial injury and increases in size only by pushing out the margins of the scar and not invasion of surrounding normal tissue.\textsuperscript{[1]} The definition by Dubato – Brown\textsuperscript{[2]} appears most exact; keloids are thick scars of human skin and cornea, produced by deposition of excessive amounts of collagen over prolonged period.

**MATERIALS AND METHOD**

![Fig. 1 :The view of the penis before surgical excision and triamcinolone treatment](image1)

![Fig. 2 :The view of the penis after surgical excision and triamcinolone treatment](image2)

A two year retrospective review of 67 patients who presented with 93 keloids and were managed in University of Calabar Teaching Hospital, Calabar, Nigerian from January 2012 to December 2013. Data were obtained from medical record unit, wards and theatre records.
The following information was retrieved; age, gender, cause of scar, latent period, site of lesion, treatment modality and Outcome.

RESULT
The first case was 13 months, a presentation with keloid on the glans penis extending to the coronal sulcus dorsally. It measured 10mm by 5mm but it was worrisome to the parents as the child was about to start nursery school. It was treated with intralesional triamcinolone with good outcome. The second patient presented at 32 months with penile keloid located at the penile shaft and extending to the coronal sulcus dorsally. It measured 30mm by 20mm. The keloid was excised and intralesional triamcinolone was given with good outcome.

DISCUSSION
Only humans are affected by keloid scar formation and those of African descent are particularly susceptible to keloid and hypertrophic scar formation. Oluwasanami[3] described several references to keloid scars in early Nigerian history. It is certain that of both keloids and hypertrophic scars is greater in negroid population. Individuals of West African and Southern Indian origin appear at greater risk of keloid formation. In these races, spontaneous development of keloids in many parts of the body has been described.[4,5] Certain individuals appear to have an increased susceptibility to keloid formation as a result of hereditary factors.

Patient age appears to correlate well with the incidence of keloid scar formation. Younger patients are more at risk of developing keloids or hypertrophic scars, which may be because of the greater capacity of younger skin for collagen synthesis or the greater skin tension in younger individuals, although keloid may develop at any age. However very young children rarely develop keloid scar which may be because of the inherent immaturity of the neonatal immune system.[6] Our patients presented with keloids following circumcision at the neonatal period which made them unique and of interest for the report. Because of the immaturity of the immune system neonates are not expected to form keloid. The literature search revealed that the reported cases were patients that had circumcision as teenagers or adults but rarely at the neonatal period.

The clinical features of keloids are varied. The time between cutaneous injury and onset of hypertrophic scar or keloid formation may vary from weeks to years. But hypertrophic scars
differ from keloids in the tendency of hypertrophic scars will regress spontaneously over time while keloid remain elevated.[7] The symptoms are swelling, pruritus, erythema and pain. Several modes of treatment exist for keloids. The most common therapy is surgical excision coupled with intralesional steroid injection and radiation therapy. Due to close proximity of the germ cells, radiation therapy has not been desirable therapy for penile keloids. In our index patients, the use of triamcinolone and surgical excision were adopted with good outcome.

Local recurrence rates of keloids removed by surgical excision alone can be significant but surgery combined with injection of corticosteroids can reduce the local recurrence rates to below 50%. [8] In our index patients, the second patient had local recurrence which was overcomed by the surgical excision and intralesional corticosteroid which was commenced intraoperatively but he had delayed suture removal.

However steroid treatment carries the risk of adverse effects including subcutaneous atrophy, telangiectasia, pigment changes and systemic side effects.[9] We only noticed the pigment changes at the site of injection in the first patient.

Current complication rate for male circumcision is 2-4%. [10] Hematoma, edema, infection and incision dehiscence is encountered more often.

CONCLUSION
Penile keloids are rare presentation, although the penis is subject to frequent trauma of circumcision and repair of hypospsdias and epispadas. Paediatric penile keloids following neonatal circumcision in families without known family history of keloids pose a challenge and concern. A further study to unfold the actual aetiology and its manifestation in neonatal and childhood periods becomes imperative.

REFERENCES


