



KELOID FORMATION IN POST-HERNIOTOMY SCAR FOLLOWING SURGERY FOR CONGENITAL INGUINAL HERNIA IN A 12-YEAR-OLD BOY: A RARE POSTOPERATIVE SEQUELAE

Dr. Urvish Doshi¹, Dr. Nagma Rangrej², Dr. Nitansh Patidar³, Dr. Devanshi Ramesh^{4*}, Dr. Thulasi Ram⁵

¹Senior Consultant, Department of General Surgery, Sheth Vadilal Sarabhai General Hospital and Sheth Chinai Maternity Hospital, Ahmedabad, Gujarat, India.

^{2,3}Third Year Resident, Department of General Surgery, Sheth Vadilal Sarabhai General Hospital and Sheth Chinai Maternity Hospital, Ahmedabad, Gujarat, India.

^{4,5}Second year Resident, Department of General Surgery, Sheth Vadilal Sarabhai General Hospital and Sheth Chinai Maternity Hospital, Ahmedabad, Gujarat, India.

Corresponding Author: Dr. Devanshi Ramesh

Email: devanshi.ramesh@gmail.com

ABSTRACT

Keloid is a benign fibro-proliferative disorder characterized by excessive collagen deposition extending beyond the original wound margins. Although commonly observed after ear piercing, burns, and surgeries over the chest and shoulders, its occurrence following inguinal herniotomy is rare, particularly in the paediatric age group. We report a case of a 12-year-old boy who developed a progressively enlarging keloid over a right inguinal surgical scar following herniotomy performed one and half year back for congenital inguinal hernia. The lesion was cosmetically disfiguring and resistant to conservative management. This case emphasizes the need for awareness of abnormal scar responses even in low-tension surgical areas and highlights the importance of multimodal management and long-term follow-up.

Keywords: Keloid, Congenital Inguinal Hernia, Herniotomy Scar, Paediatric Surgery, Abnormal Scar.

INTRODUCTION

Keloids are abnormal scars resulting from dysregulated wound healing and excessive collagen production [1].

They extend beyond the boundaries of the original wound and rarely regress spontaneously. Common sites include the presternal region, shoulders, upper back, and earlobes [2]. The incidence is higher in children and adolescents, especially in individuals with darker skin as compared to caucasians [3]. Keloid formation in the inguinal region is unusual due to relatively low skin tension and favorable vascularity [4]. Post-herniorrhaphy or herniotomy keloids in children are rarely reported, making this case clinically significant.

Case Description

A 12 year-old boy presented to the surgical outpatient department with a painless, gradually enlarging swelling over the right inguinal region at

the site of a previous surgical scar. He had undergone right sided herniotomy for right congenital inguinal hernia one and half years back. The postoperative period at that time was uneventful with primary wound healing.

Parents noticed a small raised scar two months after surgery which progressively increased in size over the following months, associated with itching and discomfort. There was presence of similar lesion over chest following a minor trauma while playing. There was no history of similar complain in any other family member.

The child had received four sessions of intralesional corticosteroid injections and cryotherapy at another center with minimal response.

On examination:

A solitary, well-defined swelling is present over the medial aspect of the right inguinal herniotomy scar. The lesion measures approximately 4*3*1cm, is pedunculated and multilobulated in appearance, and extends beyond the margins of the original surgical incision. The surface is smooth, shiny, and pinkish in colour with a firm consistency. The swelling is nontender, freely mobile over the underlying structures, and shows no local rise of temperature, discharge, ulceration, or signs of infection. Surrounding skin appears normal. Cough impulse is



www.ajmrhs.com
eISSN: 2583-7761

Date of Received: 22-01-2026
Date Acceptance: 01-02-2026
Date of Publication: 02-03-2026

absent and there is no regional lymphadenopathy. Findings are suggestive of a post-surgical keloid scar.

Routine hematological and biochemical tests:
Within normal limit.

Ultrasound inguinal region: No evidence of recurrent hernia or collection.

Clinical Diagnosis: Postoperative keloid scar.

Management:

Under general anesthesia, circumferential incision made around the keloid and entire keloid was excised and sent for histopathology examination. Skin closed in layers and local flap done.

Outcome and follow up Biopsy confirmed the diagnosis of keloid.

Patient was lost to follow up at 3 months.



Figure 1: Keloid over right inguinal post-herniotomy scar extending beyond the original incision margins. [Patient consent: Written informed consent was obtained from the parents for publication of clinical details and photographs]

DISCUSSION

Keloids are benign fibro-proliferative tumors of the skin that arise from abnormal wound healing characterized by excessive collagen deposition extending beyond the original wound margins [1]. Unlike hypertrophic scars, which remain confined to the incision line and may regress with time, keloids show progressive growth, persistence, and a high recurrence rate after treatment [2]. They are considered a disorder of dysregulated dermal repair rather than a true neoplasm [3].

Pathophysiology:

The exact mechanism is multifactorial and not fully understood. Proposed mechanisms include excessive fibroblast proliferation, prolonged inflammatory phase, overproduction of Type III and Type I collagen, and up-regulation of growth factors such as TGF- β , PDGF, and VEGF [2,4]. Genetic predisposition and altered cytokine signaling also contribute [3].

Epidemiology and Risk Factors:

Keloids are more common in children and adolescents and young adults, individuals with darker skin phototypes, and at sites of high skin tension such as chest, shoulders, upper back, and

earlobes [2,3]. Patients with previous keloids or trauma are also at increased risk [1]. The inguinal region is an uncommon site due to relatively low tension and good vascularity; therefore, keloid formation following herniotomy or herniorrhaphy is rare [4].

Clinical Features:

Keloids typically present as firm, raised, shiny nodules or plaques with growth beyond the margins of the original wound being the hallmark sign [1]. Symptoms of itching, pain, or burning may be present and cosmetic disfigurement is common [2].

Management Challenges:

Keloids are notorious for high recurrence rates, particularly with surgical excision alone (reported recurrence up to 45–100%) [2]. Therefore, multimodal therapy is generally recommended.

Available treatment options include intralesional corticosteroids, cryotherapy, silicone gel sheets, surgical excision with adjuvant therapy, laser therapy, bleomycin, verapamil, 5-Fluorouracil, Platelet rich Plasma therapy, and radiotherapy [2,5,6].

CONCLUSION

Keloid formation following inguinal herniotomy for congenital hernia in children is rare but possible. Early recognition and multimodal management are essential to reduce cosmetic deformity and recurrence risk.

Long-term follow-up is crucial due to the unpredictable nature of keloid behaviour.

REFERENCES

1. Robles DT, Berg D. Abnormal wound healing: Keloids. *Clin Dermatol.* 2007;25:26-32.
2. Al-Attar A, Mess S, Thomassen JM, Kauffman CL, Davison SP. Keloid pathogenesis and treatment. *Plast Reconstr Surg.* 2006;117:286-300
3. Andrews JP, Marttala J, Macarak E, Rosenbloom J, Uitto J. Keloids: The paradigm of skin fibrosis. *Matrix Biol.* 2016;51:37-46
4. Bran GM, Goessler UR, Hörmann K, Riedel F, Sadick H. Keloids: Current concepts of pathogenesis. *Int J Mol Med.* 2009;24:283-9.
5. Seo BF, Ko HS, Kwon H, Jung SN. V-Y advancement flap reconstruction for keloid excision. *Arch Aesthetic Plast Surg.* 2017;23:164-7.
6. Xu J, Yang E, Yu NZ, Long X. Radiation therapy in keloid treatment. *Chin Med J.* 2017;130:1715-22.

How to cite this article: Dr. Urvish Doshi, Dr. Nagma Rangrej, Dr. Nitansh Patidar, Dr. Devanshi Ramesh, Dr. Thulasi Ram, KELOID FORMATION IN POST-HERNIOTOMY SCAR FOLLOWING SURGERY FOR CONGENITAL INGUINAL HERNIA IN A 12-YEAR-OLD BOY: A RARE POSTOPERATIVE SEQUELAE, *Asian J. Med. Res. Health Sci.*, 2026; 4 (1):394-396.

Source of Support: Nil, Conflicts of Interest: None declared.