

# Isolated post burn contracture groin presenting with squamous cell carcinoma

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## ABSTRACT

Post burn contracture of groin is a burn sequel. Ulceration of contracture can occur as contracture is not in a stabilized position. Squamous cell carcinoma, an unusual complication of long-standing post burn groin contracture, is described. Contracture and tumoral mass was excized and the resulting raw area was covered by split thickness skin graft.

**Key words:** Burn, contracture, groin, isolated, squamous cell carcinoma

## INTRODUCTION

Groin and perineum constitutes only 4-6% of total body surface area and is very important site in the body anatomically and functionally. Isolated burn injury to groin is rare and is usually associated with large surface burn injuries. Post burn contracture of the groin is a post burn sequel, the diagnosis of which is frequently delayed owing to the patient's ignorance or shyness. Although such contractures are uncommon, still they cause distressing symptoms to the patients that are difficult to treat. Since the contracture is not in a stabilized position, recurrent ulceration may occur and, in exceptional cases, squamous cell carcinoma (Marjolin's ulcer) may develop.<sup>[1]</sup>

Patients with post burn groin contractures usually present with difficulty in squatting, walking, urination, defecation, sexual function. However in our patient, ulcerative growth in right groin was the main complaint. Other complaints were difficulty in squatting and walking.

## CASE REPORT

A 70-year-old male was admitted in our department with a complaint of ulcerative growth in right groin since six months. There was history of 'Kangri' burn to right groin 16 years back for which he had not received adequate treatment. 'Kangri' is an earthen ware bowl containing glowing charcoal [Figure 1]. In our state, people use it in close proximity to groin, lower abdomen, and perineum to keep themselves warm during the winter months.

On examination, there was a contracture with ulcerative fungative growth in right groin. Patient had limitation of



**Figure 1:** [KANGRI] Traditional fire bowl used to warm the body in Kashmir, India in winters

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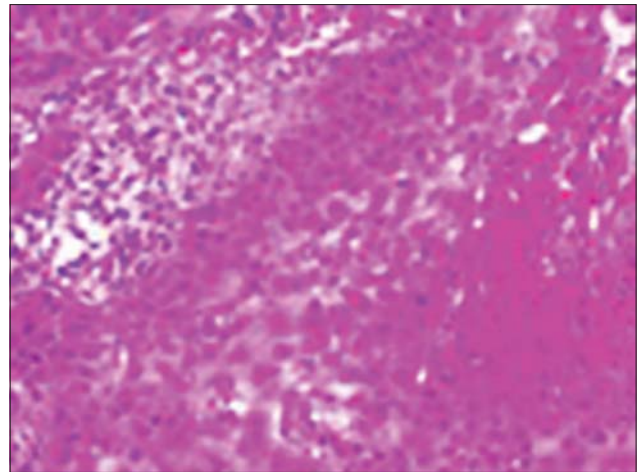
movements, especially abduction and extension of the right hip joint. Difficulties in squatting and impaired gait were also seen in this patient. The general physical and systemic examinations were normal. Base line investigations were also normal.

Under general anaesthesia, the contracture and tumoral mass was widely excised and the resulting raw area was covered by split thickness skin graft. Post-operatively, patient did well and graft take was satisfactory. Histopathology of the specimen showed well-differentiated squamous cell carcinoma [Figure 2]. Resection lines were free of tumour. He was discharged from hospital two weeks after surgery and was last seen in the outpatient clinic ten days later without complaints. Unfortunately, he did not visit again as he died four weeks after surgery in a road traffic accident. As patient was followed up for less than a month, we can only assume that he had no recurrence.

## DISCUSSION

Isolated groin burns are uncommon and so are groin contractures. Incidence of squamous cell carcinoma in post burn scars is 2%.<sup>[2-4]</sup> Marjolin's ulcer of post burn genital contracture has been reported in literature.<sup>[1]</sup> But Marjolin's ulcer (squamous cell carcinoma) of post burn groin contracture in literature has not been reported so far.

Chowdri and Darzi<sup>[5]</sup> reported that post 'Kangri' burn scar carcinoma is not a rare entity in the Kashmir valley. They observed that 'Kangri' was a sole causative agent in 32 (44.4%) patients with post burn scar carcinoma. In our case, patient had sustained 'Kangri' burn to right groin 16 years back, which was not managed properly in acute phase, and had healed with the development of contracture. As contracture was not in a stable position, there was repeated healing and breaking of ulcer, which resulted in the development of malignancy in this long-standing post burn groin contracture. Scars occurring over joints are more liable to stress which is a potent factor for a neoplastic change.<sup>[6,7]</sup> Aged skin is more prone to trauma and malignant change.<sup>[8,9]</sup> We agree with the observations of these authors. Most of the people of our state use 'Kangri' during the winter months to keep themselves warm and can land with accidental 'Kangri' burns of groins and perineum. Such 'Kangri' burns should be treated properly in acute phase and post 'Kangri' burn contractures should also be treated timely so that such malignancies can be prevented. In our patient, there was a latent period of 16 years, i.e., time period between burn injury and development of malignancy. During these 16 years, he had not sought any medical treatment/advice for his post burn groin contracture.



**Figure 2:** Histopathology of resected specimen showing typical features of SCC

## CONCLUSION

Burns to the groin should be treated adequately and timely in acute phase, so that development of post burn contractures and subsequent malignancy can be prevented. Treatment should be done in a centre where facilities for adequate resection of lesion is available.

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