

Management of Ischial Pressure Ulcer Using Hatchet Flap: Case Report

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ABSTRACT

Background: Individuals who spend long periods seated without repositioning are at increased risk of developing pressure ulcers over the ischial tuberosity.

Aim: To describe the management of an ischial pressure injury using a hatchet flap.

Objectives: To reduce wound-related morbidity, improve quality of life, and prevent recurrence of pressure injuries.

Material: A 22-year-old male developed a Grade IV ischial pressure ulcer six months after sustaining paraplegia from a fall. Although his neurological status improved gradually, the ulcer persisted and became recurrently infected. Staged wound debridement and hatchet flap coverage were performed.

Result: The flap healed uneventfully, and there was no recurrence after the patient resumed mobilization.

Conclusion: The random-pattern hatchet flap is a reliable option for the management of pressure sores of limited size, with minimal complications.

KEYWORDS

• Ischial Pressure Ulcer • Hatchet Flap • Posterior Thigh Flap.

INTRODUCTION

Ischial pressure sores frequently occur in paraplegic patients who remain confined to wheelchairs for long durations without position changes.¹ Typically, these ulcers

present with a small skin defect but extensive underlying tissue loss. Reconstruction must address the deep cavity over the ischial tuberosity by providing sufficient bulk and padding.

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This case report presents the management of a Grade IV ischial pressure ulcer using a regional fasciocutaneous flap, with the aim of improving patient recovery and enabling early ambulation.

CASE SUMMARY

This prospective case study was conducted at a tertiary care hospital following approval by the departmental scientific and ethical

committee. Informed consent was obtained from the patient.

A 22-year-old male wheelchair bound for 2 years following paraplegia due to fall from height and post D11-L3 stabilisation, resulting in pressure injury to right ischial area, with exposed bone and infected bursa. The wound is chronic non healing with repeated infection for last 6 months.



Figure 1: Preoperative picture of ischial pressure sore

To preserve further morbidity due to the pressure injury and help early ambulation of patient, thorough wound debridement with pseudotumor excision was done after painting the wound with methylene blue (figure 1)

and after 1 week time hatchel flap (figure 2) was raised from posterior thigh and wound covered. Patient maintained in prone position for 2 weeks with mobilisation started at 3 days time.



Figure 2: Intrap flap of hatchel flap

Post-operatively, the flap healed well, maintaining contour and cushioning effect over the ischium (Figure 3).



Figure 3: Follow up of the case after 4 weeks of division

RESULTS

The patient exhibited good compliance. No significant complications were observed.

DISCUSSION

Ischial pressure sores are among the most challenging ulcers to manage because of their deep cavities, frequent association with bursitis, and high recurrence rates.¹ The proximity of the ischium to the perineal region makes it prone to contamination by feces and urine, leading to skin maceration and persistent infection. Chronic infection often triggers osteomyelitis of the ischial tuberosity and ischiogluteal bursitis, accompanied by necrotic soft tissue.²

Fasciocutaneous flaps, including posterior thigh flaps, are technically simpler to elevate, allow re-advancement in recurrent cases, and have shown comparable or even superior durability against recurrent pressure compared with muscle-based flaps.² The hatchet flap represents a reliable random-pattern fasciocutaneous flap for small-to medium-sized ischial defects, covering the wound through a combination of rotation and

advancement. It provides adequate mobility, tension-free closure, and preservation of underlying muscle and fascia, thereby sparing options for future reconstruction.³

Several popular flap options for ischial coverage, the tensor fascia lata and the V-Y hamstring flaps, proved unreliable due to problems with flap vascularity and wound separation, respectively.⁴

In this case, a young paraplegic patient with a chronic Grade IV ischial ulcer underwent staged debridement and reconstruction with a posterior thigh based hatchet flap. The flap provided adequate padding over the ischial tuberosity, healed without complications, and enabled early mobilization. These results are consistent with published literature, which supports the use of hatchet flaps as a safe, simple, and resource-efficient option for ischial pressure sores.^{1,3}

Conflict of Interest: None.

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Consent for Publication: Not applicable.

Ethics Declaration: Approved by the ethical committee.

REFERENCES

1. Singh H, Jain A, Mahendru S, Khazanchi RK. Hatchet thigh flap with hemi-gluteus flap for recurrent ischial sore reconstruction. *J Wound Manag Res.* 2020;16(3):158-63. doi:10.22467/jwmr.2020.01172
2. Djedovic G, Morandi EM, Metzler J, Wirthmann A, Matiasek J, Bauer T, et al. The posterior thigh flap for defect coverage of ischial pressure sores: a critical single-centre analysis. *Int Wound J.* 2017;14(6):1154-9. doi:10.1111/iwj.12776
3. Ku I, Lee GK, Yoon S, Jeong E. A dual padding method for ischial pressure sore reconstruction with an inferior gluteal artery perforator fasciocutaneous flap and a split inferior gluteus maximus muscle flap. *Arch Plast Surg.* 2019;46(5):455-61. doi:10.5999/aps.2019.00031
4. Foster RD, Anthony JP, Mathes SJ, Hoffman WY. Ischial pressure sore coverage: a rationale for flap selection. *Br J Plast Surg.* 1997;50(6):374-9.