

CASE REPORT

Native Splinting Nightmare: A Comprehensive Case Report on Post-Traumatic Right Hip Dislocation with Acetabular Fracture Managed by Total Hip Replacement

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Abstract

Traditional bone setting (TBS), or native splinting, remains widespread in India despite the availability of modern orthopaedic services. While culturally ingrained, such practices often lead to severe complications when appropriate medical treatment is delayed. This case report describes a 60-year-old male who developed a chronic post-traumatic right hip dislocation with acetabular fracture following initial management by native splinting ('Puttur Kaathu'). Subsequent complications included foot drop, limb shortening, cellulitis, and deep vein thrombosis (DVT). Following medical stabilization, the patient underwent uncemented Total Hip Replacement (THR) with satisfactory long-term outcome. This case underscores the hazards of traditional bone setting and the need for community awareness, early diagnosis, and timely surgical intervention.

Keywords Traditional bone setting, Native splinting, Acetabular fracture, Posterior hip dislocation, Total hip replacement, DVT, Complications

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Introduction

Despite advancements in orthopaedic care, traditional bone setting (TBS) continues to thrive in many developing countries, especially in rural India. Economic constraints, cultural beliefs, and mistrust of modern healthcare are major reasons patients prefer native healers. These practitioners employ herbal pastes, bamboo splints, and tight bindings without knowledge of anatomy or aseptic technique, often leading to disastrous complications.

Neglected hip dislocations, especially when associated with acetabular fractures, represent a complex challenge for orthopaedic surgeons. Chronic dislocation alters biomechanics, disrupts vascularity, and predisposes to avascular necrosis and osteoarthritis. Total Hip Replacement (THR) remains the most effective salvage option in such scenarios when reconstruction or fixation is unfeasible.

Case Presentation

A 60-year-old male vegetable vendor presented with chronic right hip pain, limb shortening for 18 months, and swelling of the right leg for 45 days. He sustained a hip injury in a road traffic accident and sought treatment from a native bone setter, who applied traditional splints ('Puttur Kaathu') for three cycles of 15 days each. After splinting, the patient noticed inability to dorsiflex the

ankle (foot drop) and numbness in the right leg. Later, radiological evaluation revealed fracture-dislocation of the right hip with acetabular involvement. He underwent open reduction and acetabular plating in a government hospital.

Postoperatively, he was ambulant with a walker but developed limb shortening, limp, and functional disability. He also developed cellulitis and deep vein thrombosis (DVT) in the right leg, which were managed conservatively before definitive surgery.

Clinical Examination

The patient exhibited a high-stepping gait and muscle wasting over the gluteal and quadriceps regions. A healed 15 cm surgical scar was noted over the lateral thigh. The right greater trochanter was palpable at a higher level. There was tenderness over the Scarpa's triangle with a feeble femoral pulse. Range of motion was restricted: active hip flexion 30°, abduction 20°, and absent internal and external rotations. Foot drop with distal sensory loss was noted, and true shortening measured 4 cm. Special tests such as Telescopy, Galeazzi, and Trendelenburg were positive, suggesting hip instability and abductor weakness.

Ankle

Power

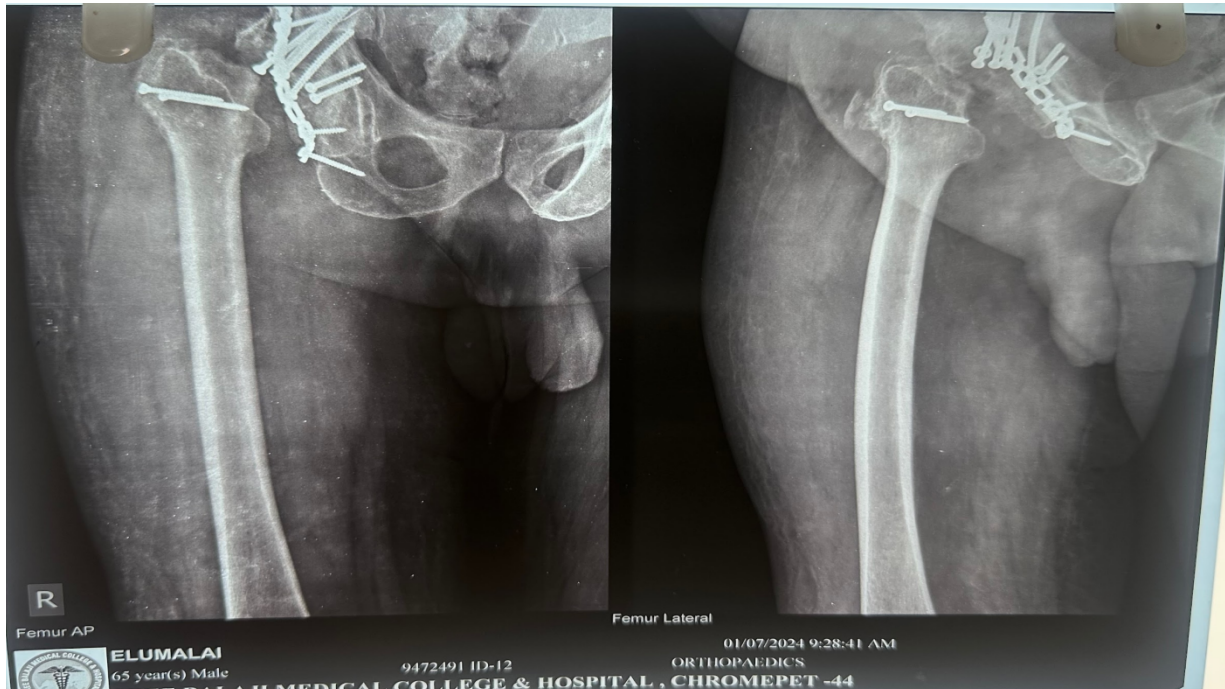
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Plantar Flexion	5/5
Dorsiflexion	1/5
Inversion	5/5
Eversion	1/5

Investigations

X-rays and CT pelvis confirmed chronic posterior hip dislocation with acetabular fracture and superior migration of the femoral head. Venous Doppler revealed DVT, and nerve conduction studies demonstrated peroneal nerve neuropathy. Blood investigations were within normal limits except for mild inflammatory markers elevation.



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IMPRESSION:

- Contour of right femoral head is lost.
- Right femoral neck not appreciated - Likely due to post traumatic changes.
- There is proximal migration of fractured shaft of the femur.
- Multiple bony fragments in the joint cavity.
- Mild periosteal thickening in fracture end of right proximal femoral shaft.
- Surgical screws in right acetabulum, iliac bone and proximal shaft of femur - *post operative changes.*
- Multiple soft tissue ossifications surrounding right proximal femoral shaft - *Myositis Ossificans to be considered.*
- Minimal Joint effusion.

- Suggested clinical correlation.

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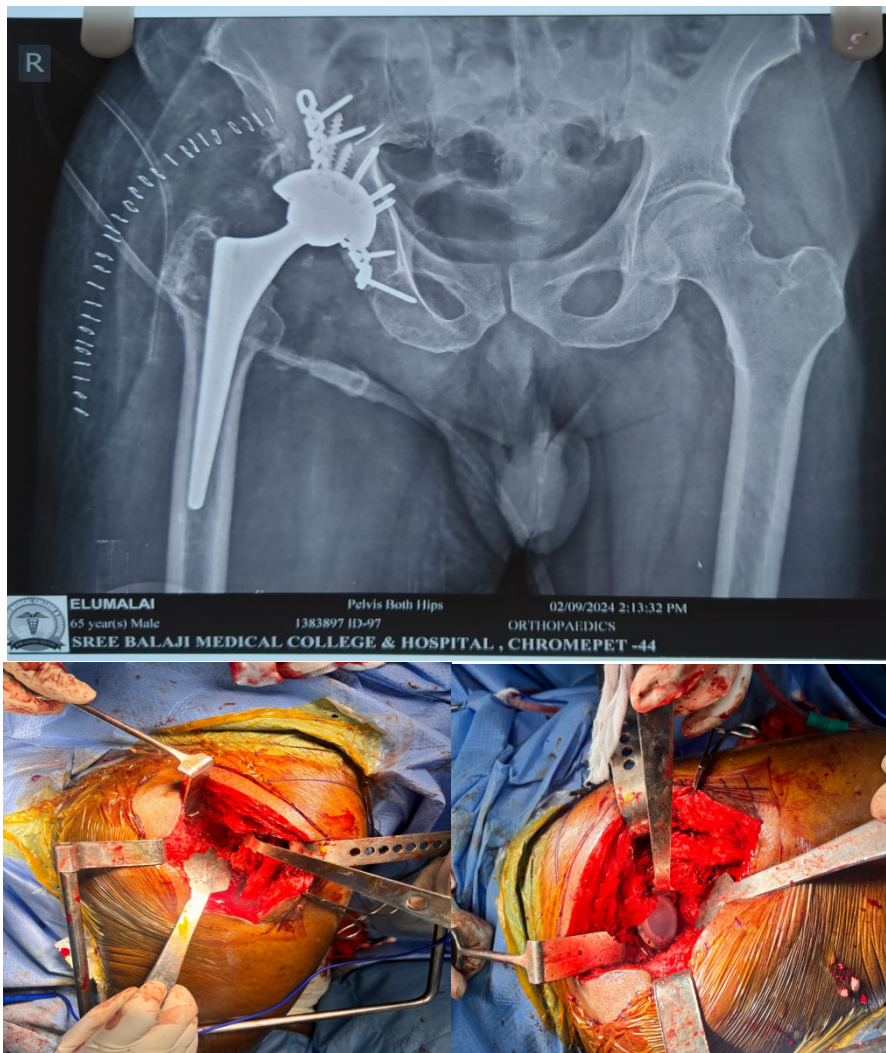
Management

The patient was first treated conservatively for DVT with anticoagulants and cellulitis with broad-spectrum antibiotics. After one month, definitive management was planned as uncemented Total Hip Replacement (THR). Under general anaesthesia, via the Kocher–Langenbeck approach, previous screws and hardware were removed, acetabulum reamed to size 46, and uncemented components implanted. The femoral canal was reamed up to size 7, and a corresponding femoral

stem was inserted with a +3 femoral head providing stable reduction. Vancomycin powder was applied locally for infection prophylaxis. Postoperative course was uneventful.

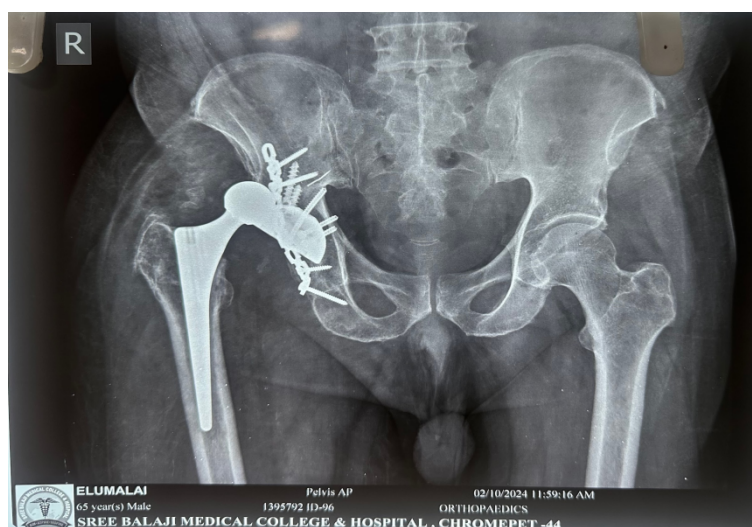
Physiotherapy began on postoperative day 2. Partial weight-bearing ambulation commenced after one week, progressing to full weight-bearing by week three. He regained independent ambulation without assistance after two months.

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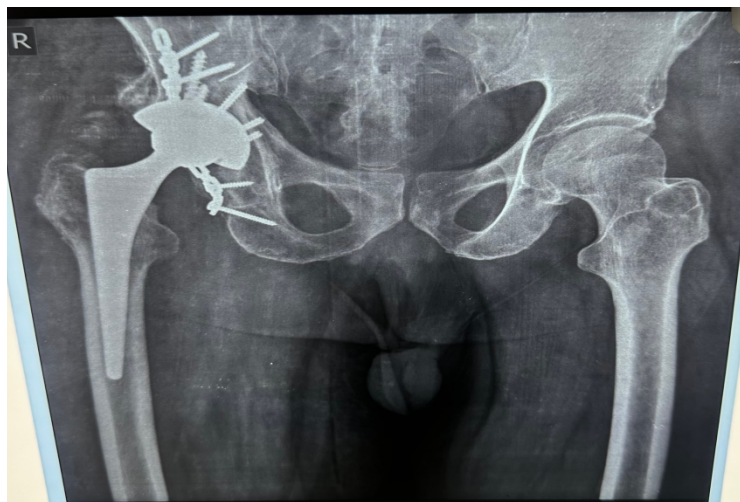
Postoperative Course and Follow-Up

At one month postoperatively, he sustained a posterior dislocation of the prosthetic hip after squatting, which was reduced under general anaesthesia. At 6-month and 1-year follow-ups, the prosthesis remained stable radiographically, and the patient reported full functional recovery with no pain or re-dislocation.



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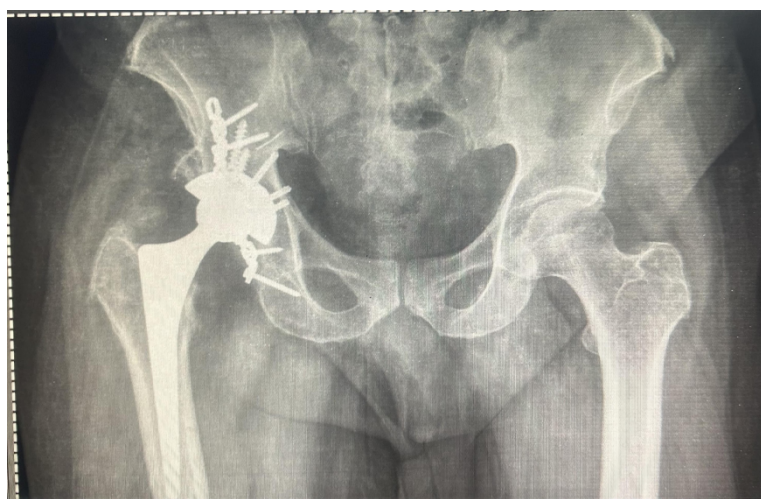
He gave H/O sitting on the ground cross legged and got up without any support following which he sustained posterior dislocation of prosthetic hip



Xray after reduction under general anesthesia at 1month



6 month follow up xray



1 year follow up xray

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Discussion

Traditional bone setting remains an under-recognized cause of musculoskeletal morbidity in India. Studies report that 30–40% of fracture-related deformities in rural areas result from delayed or inappropriate traditional treatment. Improper immobilization, tight bandaging, and unsterile techniques can lead to compartment syndrome, chronic infections, joint stiffness, pseudoarthrosis, and in severe cases, limb gangrene.

The present case illustrates multiple sequelae of native splinting: chronic hip dislocation, neuropathy due to tight binding, cellulitis from unsterile handling, and DVT from prolonged immobilization. Once the native splint was applied from ankle to hip, compression neuropathy of the peroneal nerve likely developed, causing foot drop. The delay in definitive surgical management resulted in a neglected posterior dislocation with acetabular involvement, a challenging situation even for experienced orthopaedic surgeons.

Neglected acetabular fracture-dislocations have poor outcomes if not managed appropriately. THR remains the gold standard for pain relief and restoration of joint motion when anatomical reconstruction is unfeasible. The main challenges include bone loss, soft tissue contractures, altered anatomy, and increased risk of

intraoperative fracture. Modern uncemented implants, better understanding of biomechanics, and meticulous surgical technique have improved results in such cases. Post-THR dislocation remains one of the most common complications, often linked to patient noncompliance or poor positioning of components. Our patient's postoperative dislocation following squatting reinforces the importance of patient education and strict avoidance of high-risk positions.

From a public health perspective, awareness campaigns and integration of traditional healers into mainstream healthcare could reduce complications. Community education programs emphasizing early orthopaedic consultation can mitigate the morbidity caused by native splinting.

Conclusion

This case emphasizes the devastating impact of traditional splinting and highlights the role of timely orthopaedic intervention. While Total Hip Replacement offers excellent functional outcomes in neglected acetabular dislocations, prevention through early and proper fracture management remains paramount. Community education and collaboration with traditional healers may bridge the gap between cultural practices and evidence-based medicine.



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