

# Indwelling Catheter Related Pressure Ulcer in Groin in a Tetraplegic Patient: A Case Report

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### Abstract

Ulcer prevention and its management has been a challenge in the practice of rehabilitation medicine and more so, with the tetraplegic subjects. We herein report a case of a 42-year-old tetraplegic male, who presented with multiple pressure ulcers and atypical grade-II ulcer in the right groin due to mismanagement of indwelling urethral catheter. Groin is extremely an unusual site for ulcer and no similar case has been previously reported with an ulcer in the groin in a spinal cord injury (SCI) patients. This case highlights the importance of proper positioning of indwelling urethral catheter, its care, and prevention of medical devices related (iatrogenic) complications in patients undergoing treatment.

**Key words :** Ulcer groin tetraplegia urethral secretions urethral catheter SCI.

### Introduction:

In spinal cord injury (SCI) patients, pressure ulcer usually develops in the soft tissues overlying bony prominences, resulting in ischaemia, cell death, and tissue necrosis.<sup>1</sup> Ischial tuberosity, greater trochanters, sacrum and heel are common sites. In addition to these, pressure sores at unusual sites like nasal alae, malar eminences, cervical region and medial side of knee have also been described.<sup>2</sup> Two cases of pressure ulcers in the medial aspect of thigh as an unusual complication of indwelling urethral catheter in a SCI patient has been

reported.<sup>3</sup> But ulcer in the groin due to misplacement of the indwelling catheter in a tetraplegic patient has not been reported as yet.

### Case Report:

A 45-year-old male with a history of spinal cord injury following road traffic accident 3 months ago, presented with the weakness of all the four limbs and multiple sores. He was earlier managed conservatively in other set up and was put on indwelling urethral catheter. After thorough clinical examination, he was diagnosed as traumatic tetraplegia, ASIA gr-A, with motor level of C7, sensory level of D4 bilaterally with gr-IV sacral ulcer, Gr-II bilateral trochanteric ulcers and gr-II right groin ulcer (Fig 1) with neurogenic bowel and bladder with anaemia. His investigation profile shows Hb 7g/dl, TLC-7500/cmm, ESR-105mm/1<sup>st</sup> hr, S total protein-5.2mg% with sterile urine culture and sensitivity after 24 hours of incubation. On further examination of the well circumscribed (12X12mm) right groin ulcer, it was found that the indwelling catheter was left strapped on to the anterior aspect of the right upper thigh (Fig-2). There was constant soiling of the area with the urethral secretion, well hidden underneath his lower garment which leads to the ulcer development at the right groin. He is being managed with whole blood transfusion, protein supplement, clean intermittent catheterisation and saline wound dressing.

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#### Cite as :

Sangme Ngampa, Singh Th. Khelendro, Mohes AS, Singh L. Nilachandra, Singh AK Joy. Catheter related pressure ulcer in groin in a tetraplegic patient: A Case report. *IJPMR* March 2013; Vol 24 (1): 27-8.

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Received on 27/09/2012, Accepted on 25/03/2013



**Fig 1-** Ulcer in the Groin



**Fig 2-** Catheter Strapping in the Abdomen

### Discussion:

The problems associated with the inappropriate use of medical devices can be referred to as iatrogenesis and are applicable to any form of medical treatment that causes side-effects. Iatrogenesis has been shown to be a major recurring problem in medicine and of particular concern in the older and paralytic patient<sup>4,5</sup>. However, in many cases it is potentially preventable. The initial goal is to increase the level of awareness among the treating staffs and to emphasise caution with the use and placement of medical devices. Tubing (urinary catheter, oxygen, intravenous, feeding,) should be situated so as to be completely visible during each shift and not pass under the patient's body<sup>6</sup>.

Urinary retention is a common problem during spinal shock and is often managed with continuous indwelling urethral catheter. However, these catheters result in several complications like urinary tract infection, chronic irritation resulting in urethral inflammation and stricture formation, urethral and penoscrotal fistula, urolithiasis, squamous metaplasia and rarely carcinoma of bladder<sup>7</sup>. The patient in this report was put on continuous indwelling catheter for urinary retention during the phase of spinal shock following SCI and thereafter. Improper positioning of the indwelling catheter for a prolonged period together with lack of sensation and neglected personal hygiene resulted in this ulcer in the groin. This complication could have been avoided by improving catheter care, proper positioning of the indwelling catheter and increase level of awareness among the treating staffs and caregivers alike.

### Conclusion:

The primary aim of this report is to highlight an unusual and potentially preventable complication of indwelling urethral catheter in patients with SCI. An improperly positioned indwelling urethral catheter may result in ulcers from pressure or constant soiling over the thighs in patients with SCI. Absence of sensation, weakness of both the legs and lack of knowledge about indwelling catheter care contributed to this ulcer formation. Hence it is important to properly position the indwelling urethral catheters (vertical abdomen fixation, not pulling) in these patients.

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