

The importance of thorough wound assessment in two unusual presentations

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INTRODUCTION

The role of the wound care specialist nurse is multifaceted and often challenging. Whilst the role differs from facility to facility, it commonly includes:

- ensuring compliance with Standard 8 in the *National Safety and Quality Health Service (NSQHS) Standards*, which includes following up on reported cases of pressure injuries from risk management systems; and
- assisting nursing staff in wound assessment and developing an appropriate management plan.

The two unusual case studies discussed highlight the need for holistic assessment of the patient and not just an evaluation of the wound. The first case relates to a maternity patient with bilateral breaks to the buttocks and the second, an unusual skin reaction following total knee replacement surgery.

In our organisation, the wound care specialist nurse is required to investigate any reported incidence of hospital-acquired pressure-related injury. This is done to ensure the correct assessment and diagnosis have been made, that the Braden score has been accurately completed and the appropriate preventative measures implemented to prevent escalation.

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In July 2013 a report was lodged on the electronic risk management system by midwives reporting a patient found to have two Stage II pressure injuries to her buttocks. These areas were discovered by the ward physiotherapist who had been asked to see her regarding urinary incontinence. Not surprisingly, Mrs B also complained of pain.

HISTORY

Mrs B was a 35-year-old lady whose only medical history was childhood eczema behind the knees successfully treated with hydrocortisone creams. She was allergic to Tegaderm® dressings and Elastoplast®. Prior to admission, she had been treated for a fungal infection (thrush) under her breasts, which had resolved. On 5 July 2013, Mrs B was admitted to the maternity ward for induction of labour of her first child. Her Braden score on admission was 23, indicating she was not at risk of developing pressure injuries. Although overweight, the patient was usually well, had no other co-morbidities, nor did she take any regular medication.

DURING ADMISSION

Mrs B's induction of labour began in the early morning and progressed well, was uneventful and she remained mobile for approximately eight hours until at 1640, an epidural was inserted, resulting in paraesthesia from T5 thoracic vertebrae. At 1805 she was positioned into stirrups, her perineum was washed down with blue Chlorhexidine and she had a vacuum-assisted delivery. By 1815 her baby was born following four pulls. Mrs B required an episiotomy and sutures to her perineum and remained resting in bed until 2030 when she was able to weight bear.

ASSESSMENT

Assessment by the wound care specialist nurse included a detailed history, review of the medical notes and discussion with the patient and staff involved with her care. On examination, the patient demonstrated bilateral reddened areas to her buttocks, superior to her ischial tuberosities. The affected areas measured 4.5 cm x 4 cm to her right buttock and 4 cm x 4.5 cm to her left (Figure 1). Neither area blanched to touch and both had surrounding erythema and a degree of folliculitis.

There were also several broken areas towards the centre of the non blanching areas and the edges of the wounds appeared to have dried exudate. The patient also showed signs of chafing or dermatitis on the



Figure 1: Bilateral reddened areas to buttocks



Figure 2: Lesions to knuckles

knuckles of both hands. Whilst the aetiology was unknown, it was speculated that the cause was related to her rubbing her knuckles on a pillow during breastfeeding (Figure 2).

OUTCOME AND CONCLUSION

Whilst it would be easy to conclude that the buttock wounds were pressure injuries caused by the friction of being pulled into the stirrups for the delivery or pressure from a prolonged period of lying in one position, discussions with midwives attending the patient did not support this. They confirmed the injuries were not consistent

with pressure points from the use of stirrups and were unlikely to be caused by friction as the damaged tissue was not located over the ischial tuberosities. Due to Mrs B's predisposition to dermatitis and other skin allergies, it was speculated that the wounds were a reaction to prolonged exposure to Chlorhexidine prior to showering. While this view was also supported by the obstetrician, it does not explain the lesions on the patient's knuckles. It is possible that the lesions were caused by an ingredient in the hand cleanser located in the patient's room, although the cause was not entirely clear.

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The affected areas were left exposed and Mrs B encouraged to keep off her sacrum and to feed her child whilst lying on her side. She was also asked to shower twice daily with no soap and to gently pat dry the affected areas. The injuries did not weep and therefore did not require a dressing. As Mrs B was young and fully mobile, it was not considered necessary to use pressure-relieving equipment. However, Mrs B was educated regarding the importance of frequent repositioning.

Whilst the aetiology of the wounds remained unclear, it is doubtful they were caused by pressure. They showed significant improvement within two days of being initially assessed and were virtually healed by discharge on day five.

AN ORTHOPAEDIC MYSTERY

A referral was made to the wound care specialist nurse to review a patient who had undergone a right total knee replacement seven days previously. The patient stated that the wounds (which were circumferential around the right thigh and covered the right lower leg, but were markedly worse on the upper calf) started as a red rash, which merged to form a larger, reddened area which then blistered. The wounds were described by the patient as intensely itchy.

History

The patient denied any allergies to foods or skin products. Her only medical history was occasional anxiety attacks for which she did not take medication. Five days prior to admission the patient had a lower leg wax in preparation for surgery.

During admission

The patient noticed small, reddened areas in the immediate postoperative period with the blisters appearing several days later. When reviewed on day seven postoperatively, the wound care nurse found an extensive rash which covered both the right thigh and right

lower leg. There were also large areas of blistering within the rash. Around the top of the right thigh there were marks which looked like those made by a bandage and a larger blistered area behind the right calf (Figure 3).

Assessment

With no prior history of any skin conditions, discussions with operating theatre nurses confirmed that a strip of gauze was folded and applied to the thigh under the tourniquet to prevent tissue damage. The cuff was inflated to 350 mmHg during the operation. The lower leg was then placed into a non-latex waterproof stocking net to below the knee and secured with a crepe bandage. Theatre staff felt that the calf blistering was located where a hand would be placed to hold the leg during part of the surgery. A solution of iodine 1% was applied to the surgical site only and this area was free from any blistering. It is possible that the manual pressure along with the inflated tourniquet combined to cause a pressure-type injury which had not been previously seen at this hospital.

Theatre staff speculated that the reaction was possibly due to the use of Chlorhexidine preoperatively, and exacerbated by a recent leg wax. On further questioning, however, Mrs B reported that her lower leg wax was five days prior to surgery and did not include the thigh area. Discussions with the representative for the tubular stocking net also confirmed they were not aware of any other similar cases. The surgeon's opinion was that it was caused by a reaction to iodine or the bandage.

Outcome and conclusion

The patient was discharged home with ongoing wound care provided by community nurses linked to the hospital, and although the lesions were slowly healing, blisters remained two weeks postoperatively. They were dressed daily with large Mepilex® border dressings, which were absorbent and easy to remove.

Both of these cases demonstrate the importance of a thorough assessment of the patient, their medical history and their wounds to be able to determine a cause and prevent future occurrence. Sometimes no clear explanation can be found for a particular wound and referral to a dermatologist may be necessary if further investigation is required.

ETHICS APPROVAL

Low-risk ethics approval to publish these case studies was sought and obtained from the hospitals' Human Research Ethics Committee. Photographs have been reproduced after written permission was obtained from both patients.

CONFLICT OF INTEREST

The authors declare no conflict of interest. Funding was not sought for this case study report.



Figure 3: Reddened blistered area to right thigh and calf