Novel treatment (new drug/intervention; established drug/procedure in new situation)

Simple sling for hand infection

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Summary

In the absence of a Bradford sling, I constructed a simple sling to elevate an infected hand from medical equipment that was readily available on the ward. The results were so successful and the experience so comfortable for the patient that the technique should be explained and made clear for other doctors. In this particular case, a serious side effect was avoided namely infection of nearby indwelling metalwork. The patient contacted us afterwards to say how well he felt, he had been looked after and how comfortable the equipment had been to use during his stay in hospital.

BACKGROUND

It is not an infrequent occurrence that Bradford slings are unavailable particularly in the absence of an orthopaedic unit on site. This kind of situation is common enough in the UK and even while waiting for transfer to another hospital (for example to plastic surgery) it is important to have a technique for elevating an infected hand. This is to ensure that acute medical and emergency units are employing effective techniques and to safeguard patient care.

CASE PRESENTATION

A 37-year-old architect presented to the accident and emergency department with a 3-day history of pain and swelling in the right hand. He had scraped the skin over his first web space with a piece of ceramic while doing the washing up. The hand had become painful and difficult to use and was not responding to a day of oral flucloxacillin. Ten years previously he had fallen off his mountain bike and sustained a fracture of the right distal radius and undergone open reduction and internal fixation.

Figure 1 Infected hand having been marked by the general practitioner. By the time of arrival at accident and emergency the dorsum was grossly swollen.

On examination, he was afebrile and clinically well but with obvious swelling and erythema over the dorsum of the right hand (figure 1). There were no apparent skin breaks or portal of entry and no areas of extreme tenderness or fluctuance were found. Movements were restricted but all intact and there was no evidence of neurovascular compromise.

INVESTIGATIONS

Full blood count, renal and liver function were normal and the C-reactive protein elevated at 56 mg/l. X-ray of the right hand and distal radius showed no radioopaque foreign body in the hand and confirmed indwelling metalwork in the wrist.

DIFFERENTIAL DIAGNOSIS

Moderately severe cellulitis of the hand with nearby indwelling metalwork.

TREATMENT

- ▶ Intravenous flucloxacillin 3 g four times a day
- ▶ Oral clindamycin 600 mg four times a day
- ▶ PRN analgesia
- ▶ Simple sling attached to metallic drip stand.

Technique

The sling was constructed using a regular triangular medical bandage folded along its mirror line. The upper arm was then kept supported by the sling with the hypotenuse of the new triangle running from axilla to fingers and the tail ends fixed up to a metallic drip stand. The elbow was kept at just greater than 90 degrees so as not to restrict lymphatic flow and the fingers were allowed to curl around the cloth at the top with the forearm almost perpendicular to the floor. The hand was therefore kept comfortably elevated but without being too restricted (figure 2).

OUTCOME AND FOLLOW-UP

By 9 o'clock that evening, (the patient was admitted at 9 o'clock in the morning) the skin over the dorsum of the

Figure 2 Right arm elevated comfortably in sling in absence of formal Bradford sling.

hand was beginning to wrinkle and the pain was starting to subside. After 36 h of wearing the sling, the hand was rapidly improving and the movements becoming more full (figure 3). After 5 days of intravenous antibiotics, the patient was allowed to go home and by the following week he was back at work. He completed a 2 week course total of flucloxacillin and clindamycin and made a full recovery. He has since contacted me by email to express his thanks for the care he received and said that there has been no recurrence and no further complications.

DISCUSSION

There have been no similar cases to this published in peer reviewed medical journals. Although it was only a moderately severe hand infection, in that there were no indications for surgical intervention and he was not systemically unwell, it was still a risky scenario with nearby indwelling metalwork. Whether or not it would have cleared so quickly without elevating the hand is impossible to say but it is certainly a technique worth employing when managing cases of similar severity or indeed for more severe cases while waiting for external transfer. The current National Health Service 'Guidelines on the Management of Cellulitis in Adults (June 2005)' does not actually specify that it has

Figure 3 Recovering hand after 36 h in the sling with old scar over indwelling metalwork.

to be a Bradford sling but mentions elevating the limb as part of standard practice.¹ This technique should receive great attention as one practical way of achieving this and I hope it can be easily and quickly reproduced.

Learning points

- ▶ Always find a way to elevate an infected hand.
- ▶ If no Bradford sling is available then consider constructing a simple sling using this technique.
- ▶ Even if waiting for external transfer then still consider employing this technique to avoid worsening of the infection.

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Competing interests None.

Patient consent Obtained.

REFERENCES

1. Clinical Resource Efficiency Support Team (CREST). Guidelines on the management of cellulitis in adults. <http://www.crestni.org.uk> 2005. (ISBN 1-903982-12-X) (accessed 4 September 2011).

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