

**Assessment and follow-up of sensory loss to foot
16HDC01557, 28 June 2019**

*District health board ~ Senior medical officer ~
Nerve damage ~ Assessment ~ Right 4(1)*

A 22-year-old woman attended the emergency department of a public hospital with glass in her left lower leg and a numb foot. An X-ray showed no fragments of glass in the wound, and the emergency medicine registrar noted that the woman reported an area of numbness. The on-call orthopaedic registrar was called, and he documented a sensory loss measuring approximately 6cm in diameter on her heel.

The registrar recorded that in the morning he would discuss the case with the consultant orthopaedic surgeon on call, and would call the woman with an update. The wound was sutured and bandaged, and she was discharged home. She was advised not to eat or drink anything in case she needed surgery to repair the nerve. She was told that she would be telephoned in the morning with further instructions. The discharge summary stated that the sutures were to be removed by the GP in 10 days' time, and that the woman should seek medical attention earlier if she noticed any sign of infection.

The case was discussed at the handover meeting in the morning, and it was decided that surgery was not required. A consultant orthopaedic surgeon was the senior medical officer (SMO) at the meeting. The woman was telephoned and advised that surgery was not indicated, and that further care would be with her GP rather than the orthopaedic service.

Over the next three months, the wound became infected and left "a nasty scar", and the bottom of the woman's foot was sometimes so painful that she could not stand. Her GP prescribed nortriptyline. After six months, the pain worsened, and the woman saw a physiotherapist and a sports medicine doctor, and was referred to an orthopaedic surgeon and then a plastic and reconstructive surgeon.

The plastic and reconstructive surgeon told the woman that "the nerve should have been operated on within 48 hours as there had been serious damage to the main nerve that went through to the bottom of [her] foot and toes". Nerve grafting was undertaken, and the woman was referred for physiotherapy to strengthen the muscles in the sole of her foot and to increase the range of movement in her ankle.

Findings

The wound was a deep penetrating injury with an area of numbness, and surgical exploration should have been undertaken to check for nerve damage. The woman received no reassessment or follow-up by a senior clinician on the day of admission or at any stage afterwards. Accordingly, it was found that the DHB breached Right 4(1).

The Deputy Commissioner criticised the SMO for failing to recall the woman for further assessment, and noted the importance of adequate support for junior staff to enable the provision of safe care to patients.

Recommendations

It was recommended that the DHB (a) use the woman's case for training orthopaedic registrars; (b) emphasise in the induction and ongoing training of orthopaedic clinicians that all penetrating injuries overlying a neurovascular structure with sensory or motor signs be assessed by an SMO regarding the need for surgical exploration; (c) consider whether its systems can be improved regarding appropriate supervision of junior registrars; and (d) provide a written apology to the woman.