been diagnosed. Subsequently, he had undergone total arthroplas-
ties of these joints.

Discussion

It is imperative to interpret all of the information available on any radiograph. This becomes even more important when radiographs are not formally reported, as is often the case within the Fracture Clinic. The onus is therefore on the orthopaedic surgeon to examine the entire image carefully.

The new Ionising Radiation (Medical Exposure) Regulations 2000 which were implemented in January 2001, state that all radiographs must have a documented report within the patients’ notes. This is now a legal requirement. The radiograph can be reported either by a radiologist or by the clinician who requested the radiograph. Orthopaedic surgeons will therefore often be solely responsible for documenting the findings of radiographs within the Fracture Clinic. It is obviously important that all abnormalities are detected on these radiographs. Lesions within the lung field which are seen on a shoulder radiograph are a good example of pathology which may be easily overlooked.

AN UNUSUAL CASE OF A POSTOPERATIVE BONE CYST

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We describe an unusual case of a postoperative bone cyst resulting from a retained fragment of surgical glove. We highlight some of the problems associated with gloves and suggest ways of safeguarding against similar complications.

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Cystic changes in bone present a diagnostic challenge. In the postoperative setting, they often herald a serious complication such as infection or a reaction to foreign material such as silicone. We report a case of a solitary bone cyst which developed after Wilson’s metatarsal osteotomy. It illustrates a potential and previously unreported complication relating to the use of surgical gloves and we suggest ways in which this may be avoided.

Case report

A 16-year-old girl presented with hallux valgus. Wilson’s osteot-
omy was undertaken on the left foot, using multiple drill holes and an osteotome. Her immediate postoperative recovery was uneventful. Four weeks later, she complained of pain in the first metatarsal. Radiographs of the foot were normal, and the serum levels of inflammatory markers were within normal limits. The pain persisted and 18 months after the operation a repeat radio-
graph showed a bone cyst in the line of the healed osteotomy (Fig. 1). An isotope bone scan showed no increased uptake. Open exploration showed that the cavity of the cyst contained clear pale yellow fluid and fragments of surgical glove approximately 3 mm in diameter. After curettage and bone grafting (Fig. 2) she made a full and rapid recovery.

Analysis of the wall of the cyst and its contents revealed aseptic, chronic inflammation, and a small piece of non-refractive hyaline material. This was shown to be latex, presumably from a glove torn during the initial osteotomy.

Discussion

Bone cysts arising after an operation are uncommon. The most common cause is infection but they can also arise as a foreign-body reaction. To our knowledge, there is only one previously reported case of a retained portion of a latex glove which acted as the focus for infection and formation of a secondary cyst. In that patient a fragment of glove was found in an abscess complicating
intramedullary fixation of a fracture of the femur. In our patient the foreign body induced an inflammatory reaction and cystic changes in bone without infection.

The wearing of gloves is an accepted part of surgical practice, but there are many complications associated with gloves. Hypersensitivity to latex affects many medical professionals and the starch powder used on some gloves may cause peritonitis. It has been reported that between 20% and 30% of gloves tear during surgery and the surgeon is often unaware that his glove has torn. Power tools with wires and drills can easily puncture gloves. In our patient, we presume that the drill used for the osteotomy caused the damage to the glove. The practice of double-gloving reduces tactile feedback and small tears in the outer gloves may not be recognised. They may work loose leaving a flap distal to the fingertip, which can easily be torn.

Inner gloves of a contrasting colour as in the Reveal system should alert the surgeon to any damage. We also suggest that a brief visual check and adjustment of the fit of the gloves at intervals should be made throughout any procedure in which gloves may be particularly vulnerable. This simple surgical discipline may reduce the incidence of similar complications.

Postoperative bone cysts are a rare complication of orthopaedic surgery and usually indicate underlying sepsis. Our case illustrates a more unusual, sterile aetiology and highlights the importance of rigorous surgical discipline in ensuring that gloves are not damaged.

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References