cating quantitative estimates of risk such as those in our decision model.

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RESEARCH LETTERS

Retained Needle Fragments in Patients With Diabetic Neuropathy

To the Editor: Long-standing peripheral neuropathy often compromises the normal protective mechanisms of pain in the affected extremities. In addition to chronic ulceration, acute injury due to foreign bodies also may occur. Broken fragments of insulin needles may “silently” penetrate the soft tissues, acting as a constant source of infection and reinjury. While the risk of such “silent needle” penetration seems apparent, only a single case of this complication has been reported previously.

Report of Cases. From 1988 to 1999 we evaluated 6 patients with insulin-dependent diabetes with sensory neuropathy and needle fragments in soft tissues. The patients were aged 47 to 75 years, 5 were women, and 5 were African American. Four patients had needle fragments in the soft tissues of their feet, 1 patient had a fragment in the abdominal wall, and 1 with coincidental syringomyelia had a fragment in the shoulder. Two patients had severe proximal muscle weakness, and 3 had neuropathic arthropathy of the foot and ankle. One patient had amputation of the right great toe secondary to osteomyelitis. Radiography of this patient’s left foot and ankle (FIGURE) revealed neuropathic arthropathy and 2 needle fragments embedded in the soft tissues.

Comment. The most common cause of peripheral sensory neuropathy is type 2 diabetes mellitus. The sensory deficit often results in significant morbidity such as neuropathic arthropathy and soft tissue injuries with secondary ulcers on the foot. These lesions are caused by a loss of pain-mediated compensatory mechanisms during normal weight-bearing movement. Unfortunately, regular insulin injections, which are so vital in treating diabetes, pose a risk by exposing the patient to small and very sharp foreign bodies, particularly if these needles are broken off prior to disposal. The feet of diabetic patients are prone to frequent complications from even trivial injuries due to their relative ischemia and neuropathic insensitivity. Furthermore, walking barefoot, carpeted floors, compromised visual acuity due to retinopathy, and abnormal gait due to myopathy all increase the risk of injury. Physicians caring for patients with sensory neuropathy should look for evidence of puncture wounds, and radiographs of the foot should be examined carefully for tiny metal fragments.

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Cholera Incidence and El Niño–Related Higher Ambient Temperature

To the Editor: Since the 1991 epidemic, cholera continues to be an important health problem in Peru. More than 260,000 cases were reported in Lima alone by the end of 1993, when the epidemic was brought under control. Recent investigations suggest the existence of an environmental aquatic reservoir for Vibrio cholerae O1. Furthermore, cholera seasonality in endemic areas suggests possible long-term survival of V cholerae in the environment. Therefore, extreme weather