antibiotics followed by oral antibiotics for a total course of three weeks. The series also demonstrates the importance of diagnosis within the first 24 to 48 hours, before a clinical abscess appears.

I wish to acknowledge the assistance provided by Mr M.B. Menelaus and the members of the Orthopaedic Department of the Royal Children’s Hospital.

MEASUREMENT OF LEG LENGTH
BY COMPUTERISED TOMOGRAPHIC SCANOGRAPHY: BRIEF REPORT

R. P. L. CAREY, J. F. DE CAMPO, M. B. MENELAUS

We describe a technique for the accurate measurement of total leg length, including heel height. Computerised tomography (CT) can be used to measure the length of each tibia and femur (Helms and McCarthy 1984) but this technique cannot measure discrepancy of leg length distal to the ankle. The heel height may be a significant component of total discrepancy. Our technique allows this to be measured accurately with the foot in the same relationship to the tibia as in the standing position. It is a quick method with 50 to 100 times less radiation than orthoroentgenography (Green, Wyatt and Anderson 1946).

Method. The patient lies supine on the CT table with both legs laterally rotated about 30° so that the level of hip, knee, ankle and calcaneus will be clearly visible on an anteroposterior view. The foot is held in a plantigrade position by a polypropylene brace or, if there is fixed equinus, in as much ankle dorsiflexion as possible. Fixed deformities of hip or knee can be accommodated by rolling the patient to one or other side when each limb can be scanned separately with no loss of accuracy.

Heel height is measured from the distal end of the tibia to the level of the most distal point on the plantar surface of the os calcis. Figures 1, 2 and 3 show significant shortening of the right femur, the right tibia and the right heel height.

Discussion. Whilst indirect measurement of leg-length discrepancy by the use of blocks is often adequate, there are occasions when this is difficult because of pain, fixed deformity, or muscular weakness; there are also occasions when accurate measurement of bone lengths is required, such as the timing of epiphyseal arrest as described by Moseley (1977). Cursor placement determines the degree of accuracy of CT scanography (Helms

Figs. 1 to 3

CT scanograms show length discrepancies of 0.6 cm in the femur, 2.8 cm in the tibia and 2.8 cm of heel height (45% of the total). Note that there is some equinus deformity on the right. This deformity was fixed and precluded accurate assessment of discrepancy by blocks.

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CAISSON DISEASE OF THE TALUS: BRIEF REPORT

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Caisson disease of bone (dysbaric osteonecrosis) is a well-recognised occupational hazard of diving that has become increasingly important in association with the search for oil in the North Sea.

We report a case involving the talus. This unfamiliar site has implications for the screening of individuals at risk, and medico-legally in compensation cases.

Case history. A 32-year-old white man gave a one-year history of intermittent, painful swelling of the ankles, worse on the right. Swelling had occurred about once a month, lasting four to five days, but between attacks the ankles were normal. No other joints were affected and he was otherwise fit and well, having had no previous major illness, taking no medication and denying alcohol abuse. He had worked in the North Sea as a commercial diver for about five years, undertaking non-saturation dives to 200 feet on helium-oxygen mixtures. He admitted to five attacks of Type 1 bends despite adhering to his firm's decompression tables.

There was no clinical abnormality in either ankle, and plain radiographs were equivocal and considered to be normal, but scintigraphy with $^{99m}$Tc-diphosphonate showed a slight increase in activity in the whole of the right talus with a focal area posteriorly, near the os trigonum. Tomograms of the talus showed a wedge-shaped area of juxta-articular sclerosis (Fig. 1). Because of the symptoms, a subchondral fracture was suspected, and this was confirmed by arthrography (Fig. 2). Plain radiographs of the hips, knees and shoulders were all normal, as were a full blood count, the plasma viscosity and routine biochemistry.

Caisson disease of the talus was diagnosed and is being managed conservatively.

Discussion. We could find no previous reports of caisson disease of the talus. This suggests that current screening methods, based on the premise that most lesions are in the long bones (Gregg and Walder 1986), may underestimate the prevalence of bone damage. It is important that all possible sites for caisson disease are documented because of the increasing number of compensation claims for significant disability. Caisson disease tends to affect otherwise fit young men, so compensation claims may be very high and failure to

Fig. 1
Anteroposterior tomogram of the right talus, showing a wedge-shaped area of sclerosis.

Fig. 2
Anteroposterior arthrograph of the right ankle showing a defect in the articular cartilage and subchondral bone.