Letters to the editor

To the Editor:

I read with interest the article by Yeung et al. 1 Although clubfoot is a very common problem, researchers have still not reached a consensus on a reproducible description or assessment of the foot. The authors classified their patients’ conditions as severe clubfoot deformity according to the Dimeglio classification. 2 Two methods were used to hold the feet for radiograph taking: strapping the ankle with tapes versus dorsiflexion with a wooden block. The authors were unable to measure the talocalcaneal angles on the anteroposterior radiographs using forced dorsiflexion. Figures 4b and 5b showing the feet being held flat against the X-ray plate are less likely to give good-quality radiographs. It is recommended that the tube be tilted cranially 30 degrees in order to see the rudimentary eccentric ossifying nuclei in cartilage enlarging these small feet. 3-5 The method recommended by Beatson and Pearsons 5 for the measurement of talocalcaneal index was devised to outline the nuclear shadows of both talus and calcaneus. For anteroposterior view, the feet are held flat soles against the plate below, knees bent to 45° and X-ray tube tilted cranially 30°. This shows both the nuclei crossing each other making the anterior talocalcaneal angle. For lateral view, the feet are

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Authors’ reply

We agree with the concern about refracture in the long term despite the initial solid clinical and radiographic union. Cases 1 and 2 were operated in August 2000 and July 2003, respectively, and solid union was achieved at 4 months; no refracture was observed despite no external protection at 5 and 3 years, respectively. Use of an intramedullary nail minimises the risk of refracture 1,2 and we do not plan to remove the nails in both cases. The nail may have to be changed to a longer one to ensure prolonged and adequate internal splintage. 1

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Radiographic assessment of congenital talipes equinovarus: strapping versus forced dorsiflexion

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I read with interest the article by Yeung et al. 1 Although clubfoot is a very common problem, researchers have still not reached a consensus on a reproducible description or assessment of the foot. The authors classified their patients’ conditions as severe clubfoot deformity according to the Dimeglio classification. 2 Two methods were used to hold the feet for radiograph taking: strapping the ankle with tapes versus dorsiflexion with a wooden block. The authors were unable to measure the talocalcaneal angles on the anteroposterior radiographs using forced dorsiflexion. Figures 4b and 5b showing the feet being held flat against the X-ray plate are less likely to give good-quality radiographs. It is recommended that the tube be tilted cranially 30 degrees in order to see the rudimentary eccentric ossifying nuclei in cartilage enlarging these small feet. 3-5 The method recommended by Beatson and Pearsons 5 for the measurement of talocalcaneal index was devised to outline the nuclear shadows of both talus and calcaneus. For anteroposterior view, the feet are held flat soles against the plate below, knees bent to 45° and X-ray tube tiltedcranially 30°. This shows both the nuclei crossing each other making the anterior talocalcaneal angle. For lateral view, the feet are...
supported from below, holding the soles against a specially designed apparatus which allows the feet to be radiographed in lateral view. This was the lateral talocalcaneal measurement of the talocalcaneal index. The sum of the 2 angles is called talocalcaneal index. The cranial tilt of the tube eliminates the possible overlapping of shadows from the other bones.

Holding the feet in 30 degrees of planter flexion during this procedure has been advocated. This may explain why the authors were unable to measure the angles in anteroposterior views between the talus and calcaneus. Drawing lines along the medial edge of the talus and the lateral border of the calcaneus during measurements has been recommended.

The angles obtained by the authors were rather borderline, with the talocalcaneal angle being 19.4° in the anteroposterior and 22° in the lateral radiographs. The difference between the groups was small. Even with strapping, it was quite difficult to keep the feet still, so there might be room for strong sedation in these children.

Use of wooden block dorsiflexion is very unlikely to correct the severe multiplanar deformity, nor to bring it into one plane as is desirable when obtaining lateral X-rays.

The lower end of the fibula lies markedly posterior in the lateral views and is likely to be a source of error in the measurement of angles and may even show the head of the talus flattened. Inclusion of a few radiographs in the article would have been helpful.

A uniform method that can give reproducible results is needed so that the grades of deformity and results of treatment can be measured with minimal inter- and intra-observer differences.

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REFERENCES