## Authors' reply

## Sir,

We thank the author<sup>1</sup> for the interest shown in our paper.<sup>2</sup> We will attempt to answer all the individual queries raised in the letter.

- 1. We are aware of the paper by Candal-Couto *et al.*,<sup>3</sup> mentioned by the author. This paper quotes similar results from the work by Xenos *et al.*,<sup>4</sup> and suggests that sagittal plane displacement and a lateral radiograph are more sensitive to identify diastasis. However, both these studies are hugely limited by being cadaveric studies, where the application of the results *in vivo* is to be taken with caution. The practical difficulty in obtaining lateral radiograph intraoperatively must be considered too. Also, to our knowledge, there had not been any published paper which has validated this "sagittal shift test" for clinical assessment of the syndesmotic disruption. The "hook test" is simple to perform, widely published and easy to interpret.
- 2. The frequency with which syndesmotic fixation is used has decreased in recent years.<sup>5</sup> Better understanding of ankle biomechanics, through a medium of cadaveric and clinical studies, is probably the reason for this. We agree with the author that medial malleolar osteoligamentous complex (MMOLC) plays an important role in the stability of the mortise, and hence can be a determinant for the necessity for syndesmotic fixation. However, possibility of clinical situations like a combination of ligamentous and osseous injury with disruption of the deep portion of the deltoid ligament should be borne in mind. Though the medial malleolar fracture is adequately stabilized, the integrity of MMOLC cannot be safely vouched for.<sup>6</sup>

The perfect algorithm for the diagnosis and management of syndesmotic instability associated with ankle fractures

is still unclear. The current recommendations suggest that intraoperative assessment of syndesmotic stability is a more reliable indicator for necessity of syndesmotic fixation than any general radiographic criteria. If a doubt arises about the stability of the syndesmosis, fixation of the distal tibiofibular joint should be performed.

3. We agree that delaying removal of the trans-syndesmotic screw till 12 weeks is the best practice and is the currently adopted duration in our institution. In a recent comprehensive literature review,<sup>7</sup> the included studies, on average, showed removal of the syndesmotic screws after approximately 3–4 months. The indication is usually when the intact screws cause problems like soft tissue irritation or restriction of ankle dorsiflexion.

We once again thank the author for his valuable suggestions.

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