Technical Section

TECHNICAL NOTES & TIPS

Authorship and writing for the Technical Section

Authorship

There has been a trend towards increasing numbers of authors on Technical Notes and Tips: this sometimes seems excessive and unreasonable. A simple technical idea usually has one originator (or perhaps two, as a product of discussion) and it is then common to supervise a trainee in writing it up. That means that a tip or note might reasonably have two or three authors. Submissions are becoming more frequent with four or five names above them. This needs to be fully justified. I have started to write to any lead author who has more than two co-authors asking for a full explanation of the contribution of each and will do so increasingly. I advise that any submissions with more than three authors should be accompanied by a letter giving those details.

Writing

Submissions of 100 or 250 words should be perfect. Especially if they are being used to increase the experience (and CV) of trainees, senior authors should be sure that they are faultless. The shoddy presentation of some of the submissions we receive is difficult to excuse – the more so when there are a number of authors, each of whom should have read the final manuscript. Each author bears personal responsibility for its content and quality. I write some fairly blunt letters to the authors of short submissions with imperfect text and (commonly) references that are not cited in proper Vancouver style. I would like to remind all authors (not least senior ones) of their responsibilities to check that manuscripts are perfect. That ought to be easy with such short submissions.

Bruce Campbell

Editor, Technical Section

TECHNICAL NOTES

A comparison of digital and manual templating using PACS images

JR BERSTOCK, JCJ WEBB, RF SPENCER

Department of Orthopaedics, Weston General Hospital, Weston super Mare, UK

CORRESPONDENCE TO

JR Berstock, Department of Orthopaedics, Weston General Hospital, Grange Road, Uphill, Weston super Mare, Avon BS23 4TQ, UK.

E: drjb@vodafone.net

BACKGROUND

Manual templating using acetate transparencies allows pre-operative visualisation of anatomy and prosthesis size, as well as ease of exchange from one prosthesis type to another. Most UK hospitals have converted X-ray provision to Picture Archiving and Communication Systems (PACS; GE Centricity, GE Healthcare, Chalfont St Giles, UK), necessitating the use of digital templating.

TECHNIQUE

We assessed the accuracy and speed of templating for hip replacement in 12 patients, using final component choice as an indicator of accuracy. Each hip was templated using two methods:

- (i) Orthoview® (Meridian Technique Limited, UK) templating programme following scaling; and
- (ii) manually scaled PACS images on a computer screen superimposing acetate templates in the traditional fashion as described below.

Anteroposterior pelvic radiographs are taken with variable magnification. The amount of magnification is dependent on distances between the divergent X-ray source, the patient and the image plate. Magnification is, therefore, greater for obese patients than for slim patients. To correct for this, a pre-operative pelvic radiograph was taken with a two-pence coin strapped to the skin overlying the greater trochanter. A measuring ruler was placed on the PACS screen and the maximum diameter of the coin was magnified to the size required by our templating acetates. Acetates were then used in the traditional fashion.

DISCUSSION

Our results showed manual acetate templating to be more accurate,

correlating identically with the prosthesis stem size in 9 out of 12 cases and, with the acetabulum size, on 10 of 12 occasions. In comparison, scaled Orthoview® templating correlated with the correct femoral prosthesis size in 5 of 12 patients, and 8 of 12 for the acetabulum. Additionally, Orthoview® templating took a mean of 6 min, whereas manual templating can be achieved in under 30 s.

Manual templating of scaled PACS images using transparencies conferred considerable advantages in terms of accuracy and speed. Moreover, this method allows a hands-on assessment of the forthcoming surgical procedure immediately prior to the operation, as well as late changes in implant choice. We recommend the continuation of manual templating using modern, scaled, digital images.

Pre-operative planning when using the Wiltse approach to the lumbar spine

ANDREW WARREN, VISHAL PRASAD, MARK THOMAS
Department of Trauma and Orthopaedics, Frimley Park
Hospital, Frimley, Surrey, UK

CORRESPONDENCE TO

Andrew Warren, Department of Trauma and Orthopaedics,
Frimley Park Hospital, Portsmouth Road, Frimley, Surrey
GU16 7UJ, UK
E: doc.warren@btinternet.com

BACKGROUND

The Wiltse approach to the lumbar spine employs bilateral incisions 4.5 cm lateral to the mid-line, to gain access to the lower lumbar and sacral vertebrae. The natural cleavage plane, between

Figure 1 At L4, the distance of the natural cleavage plane of sacrospinalis is 2.5 cm from the mid-line in this patient.

Figure 2 At L5, the distance of the natural cleavage plane of sacrospinalis is 3 cm from the mid-line in this patient.

Figure 3 At S1, the distance of the natural cleavage plane of sacrospinalis is 3.5 cm from the mid-line in this patient.

the multifidus part of sacrospinalis and the longissimus part, is used.¹ This plane allows direct access to the pars, transverse processes and facet joints with minimal soft tissue dissection and retraction. This is less vascular than the mid-line approach, resulting in less bleeding.² Two lateral incisions preserve the supraspinous and interspinous ligaments, resulting in less pain.¹ Cadaveric studies show variation from 2.4–7 cm. from the mid-line for the natural cleavage plane.^{3,4} When skin incisions are made a set distance from the mid-line, access to the facet joint