The use of wedges for improving visualisation of the joint space in wrist radiographs

T Wilson, A Sahu

University of Manchester and Stockport NHS Foundation Trust, Stockport, UK

CORRESPONDENCE TO

Tom Wilson, E: thomas.wilson@student.manchester.ac.uk

BACKGROUND

With the increased use of dorsal distal radial plate and screw fixation for distal radial fractures, there is a need for improved accuracy in imaging the wrist joint. The concern with plate fixation is a screw penetrating the joint space. Postero-anterior and lateral radiographs are currently performed after internal plate fixation; if screw penetration of the joint space is suspected, the patient is referred for a CT scan. To avoid further radiation exposure and possibly even unnecessary surgery, the original radiograph must be as accurate as possible.

The articular surface of the radius at the wrist joint has a palmar tilt ranging from 3–20%;¹ this is not accounted for in standard radiographs. Cadaveric studies² suggest that performing anatomical tilt radiographs on the wrist following radial plate and screw insertion shows an increased accuracy of evaluating screw penetration of the wrist joint of 0.93 versus 0.64 for standard radiographs.

TECHNIQUE

In Stepping Hill Hospital, Stockport, this issue has been addressed with the introduction of two wrist wedges for use in wrist radiographs. An 11-degree wedge is used for postero-anterior wrist radiographs (Fig. 1) and a 22-degree wedge for lateral wrist radiographs (Fig. 2).

Figure 1 Position of the forearm and hand for a PA wrist radiograph using a foam wedge to create an 11-degree angle.

Figure 2 Position of the forearm and hand for a lateral wrist radiograph using a foam wedge to create a 22-degree angle.

DISCUSSION

The use of these wedges gives a clearer view of the wrist joint increasing accuracy and reducing the use of unnecessary CT scans from unclear or false positive radiograph images. Stepping Hill Hospital is now using the wrist wedges for all wrist radiographs due to the superior field it provides in analysis of the joint space and carpal bones.

REFERENCES

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Laparoscopic stenting of the common bile duct

A Hindmarsh, M Bignell, M Rhodes

Department of General Surgery, Norfolk and Norwich University Hospital, Norwich, UK

CORRESPONDENCE TO

Andrew Hindmarsh, Department of General Surgery, Norfolk and Norwich University Hospital, Colney Lane, Norwich NR4 7UY, UK
E: andrewhindmarsh@hotmail.com

BACKGROUND

Laparoscopic exploration of the common bile duct is a useful adjunct in the surgical management of common bile duct stones. If exploration is performed through a choledochotomy, placement of a biliary stent allows internal drainage of the biliary tree into the duodenum and facilitates primary closure of the common bile duct without the need for T-tube placement.¹

TECHNIQUE

A Terumo guide-wire is fed through the choledochotomy into the duodenum via the epigastric port using a cholangiogram clamp for directional control (Fig. 1). The guide-wire is held in place with a 5-mm grasper while the cholangiogram clamp is removed. A 4-cm, 7-Fr pigtail biliary stent is fed over the guide-wire and slid into place using a stent pusher while keeping the guide-wire under tension (Fig. 2). Correct stent place-

Figure 1 A Terumo guide-wire is fed through the choledochotomy into the duodenum.