

ROUNDUP³⁶⁰

Hip & Pelvis

Hip fractures

■ The effect of surgical delay on the outcome of surgery for hip fracture is a topic that has appeared regularly in the orthopaedic literature over the years. Researchers have been at it again, this time from a single centre in **Madrid (Spain)**. Studying 2250 patients prospectively, they found that in-hospital deaths reached an astonishing 45.9% for delays longer than 48 hours, falling to only 4.35% for delays less than this. The longer a patient waited for their operation, the worse they were likely to fare. However, the adverse effects of surgical delay were largely explained by pre-existing medical conditions, so the question is whether delay causes morbidity or whether morbidity causes delay? There was nevertheless a clear link between delay and subsequent death but perhaps not quite as clear as others have previously suggested. What frightens 360 the most, however, was that lack of operating theatre availability was the cause for delay in 60.7% of cases.¹ The 360 view? Put on those skates and fix hip fractures as soon as you can. In addition, have no mercy with management when they tell you there is no operating space that day. They do not have to live with the result of such decisions. You do.

■ Internally fixing an intertrochanteric fracture of the femoral neck is not always successful. Surgeons from **Shanghai (China)** identified 32 patients with failed internal fixation of an intertrochanteric fracture and who had then been salvaged by

conversion to total hip replacement. The post-operative Harris hip scores were good at a mean of five years after surgery and no hip had been revised. It thus appears that hip replacement is an effective salvage procedure for failed internal fixation of an intertrochanteric fracture.²

Long-term results of shelf acetabuloplasty

■ Few of us have the chance to see the very long-term results of our surgery, particularly when the original operation is performed for acetabular dysplasia. Surgeons from **Aichi-gun (Japan)** thus looked at 28 hips on which they had performed a shelf acetabuloplasty for either pre-arthrosis or early arthrosis a mean of 25 years earlier. The hips had done well. More than 50% showed no change in joint space at 20 years. Furthermore, the survival rate at ten years was an impressive 100%, a still-impressive 93% at 20 years and a quite astonishing 71% by 32 years.³ Shelf acetabuloplasty for early osteoarthrosis is clearly a procedure worth considering.

Conservative treatment of groin pain

■ They say that surgeons just like operating and they may well be right. Yet what happens if instead of performing an operation, conservative treatment is looked at instead? Researchers from **Amager (Denmark)** reported the eight- to 12-year results of an exercise programme for adductor-related groin pain. No surgery was involved. They

found the programme's early beneficial effects were still maintained all those years later with soccer players doing particularly well.⁴ Perhaps we surgeons should not be quite so keen to produce our scalpels after all.

Hip resurfacing

■ Hip resurfacing arthroplasty can still make big news, as researchers from **Tampere (Finland)** have shown, reporting a 96.7% six-year prosthetic survival rate for 144 resurfacings. Not too bad, is the 360 view. However, the dreaded aseptic lymphocyte-dominated vascular associated lesions (ALVAL) occurred in two women and avascular necrosis in two men. As with other studies, an increased cup inclination appeared to lead to trouble while neck thinning was seen in more than 10% of hips.⁵ It is good to see that most nations agree with each other's findings in the world of hip resurfacing.

■ Yet would it not be good to find a blood test that might identify a failing metal-on-metal arthroplasty of whatever design? Researchers from **Stanmore (UK)** have done this, looking at the recommended 7 ppb cut-off level recommended by the UK authorities as a maximum blood level for cobalt or chromium. The researchers concluded that blood metal ions had a good discriminant ability to separate failed from well-functioning hip arthroplasties but a level of 7 ppb, although specific, actually had poor sensitivity.⁶ It seems that blood levels are thus worth doing when

faced with a patient with a painful hip arthroplasty but should perhaps not be the sole criterion on which a revision might be based.

■ In an attempt to mimic the normal anatomy as closely as possible during hip resurfacing, surgeons from **Hohhot (China)** recognise that prosthetic position has a large impact on implant survival and function and also acknowledge that precise positioning cannot always be achieved. They have described an interesting, novel method of ensuring accurate component positioning by using a combination of three-dimensional reconstruction and reverse engineering.⁷ Perhaps we have reached a point where the human eye is simply not good enough, thinks 360. Who these days uses a handheld map when driving a car? Do we not all think satellite navigation is wonderful?

Pseudotumour from metal-on-polyethylene

■ 360 finds it interesting to learn that pseudotumours are not the sole domain of hip resurfacing arthroplasty. A simple case report from **Changsha (China)** confirms this, where a pseudotumour was identified secondary to femoral head-neck corrosion after an uncemented metal-on-polyethylene total hip replacement.⁸ At 360 we feel it might be time to take some of the heat off metal-on-metal hip resurfacing. Nothing is blameless and few things are forever. Total hip replacement is certainly not without fault.

Short-stemmed femoral components

■ However, with question marks still hanging over hip resurfacing 360 has discovered a group from **New Albany (USA)** that undertook a retrospective review of 658 cementless total hip replacements that had been inserted through a less invasive lateral approach. Of the total, 269 of the hip prostheses were of a short-stemmed design. There was a short mean follow-up of only 29.2 months. However, the researchers found fewer intra-operative complications when short-stemmed femoral components were inserted. Although only a level III study, the authors concluded that the use of shortened femoral stems does not compromise the survival and functional outcome of cementless total hip replacement. This perhaps seems an ambitious conclusion for such a short-term study but certainly the omens appear good.⁹

Hip arthroscopy for trauma

■ Hip arthroscopy is spreading worldwide at an immensely rapid rate. However, to date little has been offered about its role in the field of trauma. Surgeons from **Mexico City (Mexico)** have corrected that deficiency by reporting on 17 patients who underwent hip arthroscopy after a traumatic posterior dislocation of the joint. Surgery was performed at a mean of three months after closed reduction and resulted in a significant improvement for the majority. The clearest indication for the procedure was loose fragments inside the joint.¹⁰ So, for that next traumatic dislocation, 360 thinks it reasonable that you should talk to your nearest hip arthroscopist.

Femoroacetabular impingement

■ Femoroacetabular impingement (FAI) has become big news, based on its reported association with future osteoarthritic change in the hip. Yet what is its prevalence in asymptomatic adults? This has been investigated by researchers from **Philadelphia (USA)** who retro-

spectively looked at the CT scans of the hip where the scan had been performed for conditions unrelated to the joint. This was a large study, comprising 215 male hips and 540 female. The authors established that the cam-type femoroacetabular deformity was not rare among an asymptomatic population. In men, 13.95% of the hips were defined as pathological in terms of an abnormal α -angle being measured, and 14.88% as borderline. For females these figures were 5.56% and 6.11%, respectively.¹¹ 360 feels that there is clearly more to FAI than meets the eye and agrees with the authors of this study. A long-term epidemiological study is needed to determine the natural history of FAI.

Distal transfer of the greater trochanter

■ If a proximal femoral epiphysis closes early then coxa brevis can be the result. One solution is to transfer the greater trochanter distally and laterally. Yet does this work? Surgeons from **Ribeirão Preto (Brazil)** looked at this prospectively in 11 patients, with a mean age of 40 years, all of whom were Trendelenburg positive before surgery. The procedure eliminated the problem in either seven or eight of the patients, depending on which observer you believe.¹² Nevertheless, it appears as if transfer of the greater trochanter is a procedure worth considering for the intractable Trendelenburg gait.

Avascular necrosis

■ In certain areas of the world, avascular necrosis (AVN) of the femoral head is a major problem. In other areas it is not such an issue at all. Its treatment is also widely and hotly debated. Surgeons from **Guangzhou (China)** retrospectively reviewed 38 hips with

AVN, which had undergone free vascularised fibular grafting of the femoral head with allogeneic bone containing bone morphogenetic protein (BMP). With a mean follow-up of 28.5 months, 71% did well, 24% were unchanged and 5% had deteriorated.¹³ The 360 view? This technique is certainly a more convenient operation than many for AVN but what is the secret? Is it the fibula or is it the BMP? We do not know but trust that Guangzhou will report to us all in due course.

Pelvic osteotomy and later osteoarthritis

■ It is often difficult for surgeons to establish the long-term results of their paediatric patients. An exception has been **Bristol (UK)**. Here, a team was concerned by the suggestion that an innominate osteotomy in childhood might lead to a relative acetabular retroversion. This, in turn, might predispose to osteoarthritis. Researchers identified 30 patients (36 hips) who had undergone innominate osteotomy for a late presenting dislocation of the hip joint at least 40 years earlier.

After excluding ten hips on the basis of advanced osteoarthritic change, the team established that an innominate osteotomy before the age of five years did not cause acetabular retroversion that persisted into adulthood, and that the likely cause for osteoarthritis in these cases was actually a reduced contact area for the articulation.¹⁴

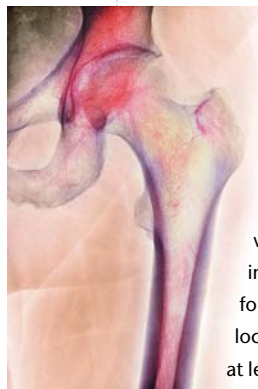
Ceramic-on-ceramic articulation

■ A ceramic-on-ceramic articulation for a total hip replacement is now widely considered appropriate, particularly for the younger patient. Surgeons in **Osaka (Japan)** have reported the long-term results of 100 consecutive third-generation ceramic-on-ceramic hip replace-

ments undertaken between 1996 and 1998. They found a pleasing 14-year survival rate of 97.9% for the socket, 97.8% for the stem and of 95.7% overall.¹⁵ 360's conclusion can only be that this design of articulation provides excellent survivorship for a significant period of time.

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