Early lesions of the labrum and acetabular cartilage in osteonecrosis of the femoral head

Sir,

We read with interest the paper by Kloen et al1 entitled ‘Early lesions of the labrum and acetabular cartilage in osteonecrosis of the femoral head’ in the January 2002 issue. Their findings were similar to those which we found in hips treated by hemiresurfacing.2 We reported that a longer duration of symptoms and a Kerboull angle >200˚ were associated with a worse grading of the acetabular cartilage with lesions not limited to the anterior labral/cartilage edge. Would the authors agree that the articulation of the acetabular cartilage with lesions not limited to the anterior labral/cartilage edge led to acetabular damage? Also, did they find any correlation between the duration of symptoms and damage to the acetabular cartilage? Certainly, our findings have made us intervene sooner when considering conservative surgery of the collapsed femoral head.

There was no mention of hemiresurfacing as a conservative solution for these young patients. Our data2 and those of others3-6 have shown this technique to be reproducible and more predictable than a free-vascularised fibular graft and proximal femoral osteotomy for relief from pain without distorting the proximal femoral anatomy. This technique re-establishes the anterior femoral offset and restores a congruent articulating surface within the acetabulum.

P. E. BEAULÉ, MD, FRCS C
Joint Replacement Institute at the Orthopaedic Hospital
Los Angeles, USA.


Authors’ reply:

Sir,

We thank Dr Beaulé for his letter and his interest in our article.

First, although his article does not specify the exact location of the damage to the labral and acetabular cartilage, our findings appear similar to those shown in his Figure 12.1 While we did not attempt to derive a correlation between the duration of symptoms or the Kerboull angle and acetabular damage, intuitively, this would be a reasonable assumption. Similarly, we would expect the Kerboull angle and the duration of symptoms also to be correlated.

With regard to which part of the head initiates the damage to the cartilage, we believe that it is the periphery of the area deformed by the collapse. At a later stage a ridge within the cartilage at the border between the collapsed and normal surface may contribute to the damage. Intraoperatively, we often saw a wave-like deformation of the softened cartilage which buckled at the junction of necrotic with viable underlying bone. This buckling was also reproduced during flexion and internal rotation/adduction of the hip. It was this prominent area of buckling which led to impingement on the labrum and adjacent acetabular cartilage. If it was simply the collapsed area of the head which caused the damage to the labral and acetabular cartilage as suggested by Dr Beaulé, we would expect to see the pattern of damage beginning more centrally and dissipating towards the periphery. Based on our intraoperative view of the impingement during flexion and internal rotation/adduction of the hip in our patients, the labral damage appears to have occurred first, followed by the damage to the acetabular cartilage.

Finally, our experience with the hemiresurfacing technique in these types of patient is limited. While various centres consider this to be a conservative approach for treating patients with osteonecrosis of the hip, we preferred a joint-preserving approach for 16 of 17 of our patients given that they were relatively young (mean age 29 years). Most of the hemiresurfacing studies mention failures because of acetabular wear. Thus far, we are not aware of any prospective study which compares the results of hemiresurfacing with free fibular grafting, femoral osteotomy or other techniques used in the treatment of avascular necrosis of the hip. The lack of direct comparison of the plethora of procedures so far described for this disease has made it difficult to identify an ‘ideal’ treatment. It is our hope that ongoing research will ultimately allow us to identify a solution which has a superior and predictable outcome.

P. KLOEN, MD
Hospital for Special Surgery
New York, USA.

M. LEUNIG, MD
R. GANZ, MD
University of Berne
Switzerland.

Management of completely displaced metaphyseal fractures of the distal radius in children

Sir,
We read with interest the article by McLauchlan et al\(^1\) in the April 2002 issue entitled ‘Management of completely displaced metaphyseal fractures of the distal radius in children’. This prospective, randomised controlled trial compared two treatments for completely displaced metaphyseal fractures of the distal radius. In our experience these fractures usually present with considerable swelling and often associated neurological deficit. The authors do not mention any such associated neurological problems in their patients.

We feel that given this, these fractures should be treated by a Kirschner-wiring technique alone. The use of a complete plaster cast to provide rotational control is inadvisable. At least two wires are required to achieve rotational control. The technique described by the authors involves the use of a single trans-fracture wire and a complete plaster cast. We feel that with this method the surgeon is incurring both the inherent risks of operative surgery and those of applying a complete plaster and possible compartment syndrome. We suggest that it would be more advisable to use either a complete plaster on its own or two or more Kirschner wires with a back slab.

A. K. Gambhir, FRCS (Trauma & Orth)
J. Fischer, MRCS
M. Waseem, FRCS (Trauma & Orth)
Wordsley
Manchester, UK.


Authors’ reply:

Sir,
We thank Messrs Gambhir, Fischer and Waseem for their interest in our paper.

We agree that these children usually present with considerable swelling after this type of injury. Two of those in our study had a transient neurapraxia of the median nerve in its sensory distribution which in both resolved by the final follow-up.

Above-elbow casts were used in both groups to ensure conformity between them. We have no experience of the proposed technique of using two wires and a plaster back slab and are not aware of any randomised study in children which supports this method of management over any other. There was no instance of compartment syndrome. We do not feel that our method put the children at any increased risk.

J. E. Robb
G. J. McLauchlan
I. H. Annan
Royal Hospital for Sick Children
Edinburgh, UK.

The provision of services for spinal disorders

Sir,
With reference to the Editorial in the April 2002 issue by Gardner\(^1\) entitled ‘The provision of services for spinal disorders’, over the last few years spinal assessment clinics have become an established part of a specialised spinal service with the aim of identification and prompt treatment of acute organic spinal pathology.\(^2,3\) These clinics are run by a trained physiotherapist who liaises with a member of the spinal team. Upon arrival at the clinic patients are asked to complete a number of functional assessment questionnaires such as the Oswestry disability index (ODI), the Roland-Morris disability score, the hospital anxiety score, the Short form-36 questionnaire, and a visual analogue score.\(^3\) They are then assessed clinically by the physiotherapist who refers those with acute organic spinal pathology to the specialised spinal clinic. Those with non-organic back pain are treated by physiotherapy, given advice and referred back to their general practitioner.\(^4\)

A spinal assessment clinic has been operational at our hospital since April 2001 during which 800 patients have been assessed and 80 have been referred to the specialised spinal clinic. This has led to a large accumulation of data for each patient.\(^3,4\) To aid in the collection and dispersal of data, a custom-made relational database has been produced by Client solutions, a subsidiary of Horizon Group.\(^4\) This database is stored in the hospital network and can only be assessed by a few designated personnel who are directly involved in the assessment and treatment of the patient.\(^4\) Data on all patients are index-linked using a case-specific number, thus allowing data from different fields on the same patient and the same fields on different patients to be extracted and viewed or analysed. The database allows easy and accurate storage of data, retrieval and analysis of clinical and functional outcome data and assists clinical assessment, research and audit.\(^4,6\) It is versatile and can be modified with ease to suit the needs of the clinician.\(^4\)

We recommend the use of similar databases for the assessment of patients with musculoskeletal conditions. The database could become a blueprint for the functional assessment of patients with arthroplasty, spinal surgery and rheumatological conditions.

A. Mofidi, MB, MMSc, FRCSI
M. Sedhom, MBBS, FRCSI
M. CasseLLs
A. Curley
D. Moore, MB, MCh, FRCSI, FRCS (Orth)
E. Fogarty, MB, FRCSI
F. Dowling, MB, MCh, FRCSI
The Adelaide & Meath Hospital
Dublin, Ireland.


Observer reliability in the arthroscopic classification of osteoarthritis of the knee

Sir,
I read with interest the article by Brismar et al\(^1\) entitled ‘Observer reliability in the arthroscopic classification of osteoarthritis of the knee’ in the January 2002 issue. The authors studied videotapes of arthroscopies of the knee in 19 patients with mild to moderate arthritis to assess the damage to the articular cartilage using various grading systems.

The results showed minimal damage in most knees. Only a small percentage had exposure and/or eburnation of bone. I believe...
that the title of this article is inaccurate. The study assessed the observers’ reliability in the arthroscopic classification of ‘lesions of the articular cartilage’, not ‘osteoarthritis’ of the knee.

Admittedly, the terminology used in the orthopaedic literature for describing lesions of the articular cartilage is confusing. It is my belief that this was propagated by the Outerbridge classification of the patella. This classification defines exposure to subchondral bone as ‘chondromalacia’. However, in observing this lesion in the article, it appears that it is not strictly a lesion of the articular cartilage, but osteoarthritis of the patella.

When arthroscopic grading of lesions of the articular cartilage is performed, the terms ‘chondromalacia’ and ‘osteoarthritis’ should not be used. The more generic term ‘lesion of the articular cartilage’ graded with one of the common classifications should be the standard of practice.

D. S. MENCHE, MD
800-A Fifth Avenue
New York, USA.


Author’s reply:

Sir,

We thank Dr Menche for his interest in our article. His remarks are pertinent since we do not know which superficial lesions of cartilage will progress and which have any clinical relevance. Therefore, a more non-specific term such as ‘lesion’ seems to be appropriate at our present level of knowledge, especially since arthroscopy seems to be an uncertain method for diagnosing such lesions.

H. BRISMAR, MD
Karolinska Institute
Stockholm, Sweden.

Simple treatment for torus fractures of the distal radius

Sir,

I read with interest the article in the November 2001 issue by Davison et al.1 entitled ‘Simple treatment for torus fractures of the distal radius’ since it accords closely to the audited practice established in our department for the last 18 months. Once such a fracture is diagnosed we apply a Futura splint in the Accident and Emergency Department and then review the patient in the next fracture clinic. There the diagnosis is confirmed and the Futura splint is replaced with a soft-cast plaster which is worn for three weeks. This is a semi-rigid close-fitting cast which allows physiological activity of the limb while preventing painful movements. We advise the patient’s parents to remove the soft-cast plaster at home after three weeks with scissors or by simply unwinding it. We do not routinely review the patient, since our audit has also shown that displacement or other problems did not occur and a second visit to the fracture clinic was unwarranted.

A possible disadvantage is the cost of using a Futura splint as well as a soft-cast plaster, but our Futura splints are re-used, thus keeping the cost to a minimum.

Possible benefits from the use of soft-cast plaster in preference to a Futura splint are that it is more comfortable and reliable since the child cannot remove the splint. It allows physiological function while in the cast, and it appears to be more secure and reassuring to the parents. The real benefits are to the patient and the family in avoiding a further hospital visit and in the reduced hospital workload.

L. MENDELA, LMS
Alexandra Hospital
Redditch, UK.


Authors’ reply:

Sir,

We thank Dr Mendia for his comments and are pleased that his audited practice is in agreement with our results.

As mentioned in our paper we had very few problems with patient or parent compliance. In a small number of very young patients, the splint was removed sometimes early, but this problem was very simply solved by the application of a Tubigrip bandage over the splint.

Dr Mendia does not state how expensive his soft casts are, how long they take to apply and who applies them. We have shown that these fractures are benign and it therefore does not matter which method of splinting is used. We prefer the Futura splint because of its low cost and ease of application and removal.

Furthermore, as highlighted by Dr Mendia, we feel that the real benefit in the change in our practice is not which method of splintage is used but rather the lack of need to follow-up outpatient visits and radiographs.

D. J. BROWN, FRCS (Trauma & Orth)
C. E. BRUCE, FRCS (Trauma & Orth)
West Kirby
Wirral, UK.

A prospective, randomised trial of internal fixation versus arthroplasty for displaced fractures of the neck of the femur

Sir,

I read with interest the article in the March 2002 issue by Rogmark et al.2 entitled ‘A prospective, randomised trial of internal fixation arthroplasty for displaced fractures of the neck of the femur’. The results and conclusions of the study, favouring primary arthroplasty over internal fixation in patients aged over 70 years, are particularly interesting knowing the widespread preference for internal fixation of these injuries in Scandinavia.

There are several studies which show poor results from internal fixation of displaced fractures of the femoral neck in those aged over 80 years.3 For the younger patient the outcome of internal fixation is better, although the overall rate of reoperation compared with arthroplasty is higher.3 Despite the conclusion in this study that primary arthroplasty be used in those over 70 years the mean age of the patients in this study was 82 years for women and 81 years for men. The authors do not give the distribution of the age of the patients.

I am concerned that an unknown number of 70-year-old patients in this study skew the age range. If the conclusions of this study are then to be applied, a biologically fit 70-year-old will be treated similarly to an infirm octogenarian and excluded from internal fixation and possible preservation of the femoral head.

N. DE ROECK, FRCS
Royal National Orthopaedic Hospital
Stanmore, UK.


Authors’ reply:

Sir,

I thank Mr de Roeck for his interest in our article.

When the material is divided into age groups, the rate of failure is 14/31 (45%) in the youngest group, aged from 70 to 74 years (Table I). We therefore concluded that primary arthroplasty was suitable for patients aged 70 years and older.

Table I. Outcome at two years after internal fixation

<table>
<thead>
<tr>
<th>Age (yrs)</th>
<th>Number</th>
<th>Successful</th>
<th>Failure</th>
<th>Uncertain</th>
<th>Died &lt;4 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 to 74</td>
<td>31</td>
<td>14</td>
<td>14</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>75 to 79</td>
<td>51</td>
<td>30</td>
<td>18</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>80 to 84</td>
<td>62</td>
<td>29</td>
<td>30</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>85 to 89</td>
<td>52</td>
<td>25</td>
<td>23</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>&gt;90</td>
<td>21</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>104</td>
<td>93</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

We now use this scheme when treating displaced fractures of the femoral neck. Consequently, all patients under 70 years receive internal fixation (Hansson hook pins). In an on-going follow-up study of patients treated in the first year using this system, we found that the rate of failure was high even in this younger population. Of 25 patients with displaced fractures of the femoral neck aged under 70 years, 11 (44%) were considered to be failures within one year. All had reoperations, ten by total hip replacement and one by hemiarthroplasty.

I do not think that in an average population of patients with hip fractures there are those who would be considered to be biologically fit 70-year-olds unless higher-energy trauma has occurred. If a patient is frail enough to sustain a hip fracture after low-energy trauma, she or he is frail enough to develop healing complications as well, regardless of age.

I think it is reasonable to have an age limit to guide the choice between internal fixation and arthroplasty. The younger a patient is, the greater is the chance that she or he will endure a second procedure if necessary. The possible preservation of the femoral head is of course a benefit. Which age limit to apply, biological or chronological, will still be a matter of debate. Perhaps different populations (urban or rural, high or low incidence of osteoporosis, etc) should have different guidelines.

C. ROGMARK, MD, PhD
Malmö University Hospital
Sweden.

Correction


On page 59 Table I was reproduced incorrectly. The correct table is shown opposite.

Table I. Details of the nine patients who underwent arthrodesis using a Mayday nail and the 17 treated by alternative techniques

<table>
<thead>
<tr>
<th>Mayday nail</th>
<th>Alternative techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>9</td>
</tr>
<tr>
<td>Mean age in years (range)</td>
<td>68 (39 to 91)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3</td>
</tr>
<tr>
<td>F</td>
<td>6</td>
</tr>
<tr>
<td>Mean number of previous procedures (range)</td>
<td>1.3 (1 to 3)</td>
</tr>
<tr>
<td>Previous history of infection (%)</td>
<td>67</td>
</tr>
</tbody>
</table>