LETTERS

MAIL³⁶⁰



We'd like your views – write to: The Editor, *Bone & Joint*³⁶⁰, 22 Buckingham Street, London WC2N 6ET or email editor360@boneandjoint.org.uk

Long-term outcome of PAO

Dear Sir,

Were it not for the mention in your Editorial (*Bone & Joint*³⁶⁰ February 2013), I would have missed the summary of the excellent article on factors predicting failure after Peri-Actabular Osteotomy (PAO)¹ from Aarhus, Denmark, as it was cunningly hidden in the section on Children's orthopaedics, instead of adjacent the related article² in the Hip & Pelvis section.

PAO is an operation for skeletally mature patients, who are often referred to as 'older children' or even 'adults'. As this and other papers show, PAO has the potential to significantly prolong the function of the hip joint.

The results of hip replacement in untreated dysplasia are not as good as in osteoarthritis,³ but PAO, by deepening the acetabulum and making cup fixation easier, improves the results to be comparable to osteoarthritis.⁴

I think one can interpret the Aarhus results to conclude that results of PAO are really dependant on two major factors: degree of pre-operative osteoarthritis (whether expressed as joint space or Tonnis grade) and accuracy of correction of the dysplasia.

Age is a less important factor, and its apparent relevance is hard for the Aarhus group to explain, as they agree that Japanese and other surgeons have shown us that older children, in their 40s and 50s, can enjoy good results from PAO,⁵⁻⁸ and can thus put off hip replacement until they grow up.

One factor not considered in this paper is femoral version: the average was 31° (which, depending on the method of measurement, is abnormal) and the range was - 25° to + 77° , and, as far as I can tell from the paper, no corrective femoral osteotomies were performed, and the femoral version was not quoted post-operatively. This may be the confounding factor that caused the Aarhus group to be unable to explain the relationship to age.

PAO is a technically demanding procedure which, unlike joint replacement, offers little incentive for industry to support surgeon training, and is therefore in short supply. You should not too-glibly confine PAOs to children under 40, thus condemning children over 40 to a hip replacement with a poorer-than-average result.

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P.S. And please don't hide articles of interest mainly to adult surgeons in the Children's section of your journal!

REFERENCES

1. Hartig-Andreasen C, Troelsen A, Thillemann TM, Søballe K. What factors predict failure 4 to 12 years after periacetabular ostetomy? *Clin Orthop Relat Res* 2012;470:2978-2987.

2. Nassif NA, Schoenecker PL, Thorsness R, Clohisy JC. Periacetabular osteotomy and combined femoral head-neck junction osteochondroplasty: a minimum two-year follow-up cohort study. J Bone Joint Surg [Am] 2012;94-A:1959-1966.

3. McBryde CW, McBryde CW, Shears E, O'Hara JN, Pynsent PB. Metal-on-metal hip resurfacing in developmental dysplasia: a case-control study. *J Bone Joint Surg [Br]* 2008;90-B:708-714.

4. Parvizi J, Burmeister H, Ganz R. Previous Bernese periacetabular osteotomy does not compromise the results of total hip arthroplasty. *Clin Orthop Relat Res* 2004;423:118-122.

5. Garbuz DS, MA Awwad, Duncan CP. Periacetabular osteotomy and total hip arthroplasty in patients older than 40 years. *J Arthroplasty* 2008;23:960–963.

6. Hasegawa Y, Kanoh T, Seki T, Matsuoka A, Kawabe K. Joint space wider than 2 mm is essential for an eccentric rotational acetabular osteotomy for adult hip dysplasia. J Orthop Sci 2010;15:620-625.

7. Teratani T, Naito M, Kiyama T, Maeyama A. Periacetabular osteotomy in patients fifty years of age or older. J Bone Joint Surg [Am] 2010;92-A:31-41.

8. Yasunaga Y, Takahashi K, Ochi M, et al. Rotational acetabular osteotomy in patients forty-six years of age or older: comparison with younger patients. *J Bone Joint Surg [Am]* 2003;85-A:266-272.

Editor-in-Chief's comment:

Many thanks for drawing our attention to the potential drawbacks and other references concerning peri-acetabular osteotomy. I completely agree that not only is PAO a demanding technique but that in the correct hands, and indeed correct patients (or even older children!) it can yield excellent results.

One of the difficulties with a journal such as 360 is deciding where to place 'cross specialty' articles. For example, research, trauma or hip would all be suitable sections for a piece on the use of biological augments in hip fracture non-unions. Almost every article included in 360 has potential relevance 'cross sub-specialty'. As we like to listen to our readership, this month sees the addition of a 'see also' line picking out the most relevant papers selected in different sub-specialities at the end of each section.

I hope you will agree this improves the accessibility of 360 and will help avoid the 'hiding away' of those interesting articles.