A SIMPLE TECHNIQUE FOR ACETABULAR REVISION:

BRIEF REPORT

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We report a technique for wide exposure of a loose acetabular component in hip revision surgery. Standard revision techniques involve the replacement of both components, but we feel that if the femoral cement–bone interface is sound, then disturbance is undesirable (Amstutz et al. 1982). However, adequate access to the acetabulum must be obtained to achieve satisfactory results (Johnston 1986). This usually involves a transfemoral approach and Bierbaum (1982) has suggested removing the femoral component from its intact cement column using that exposure. We have experienced difficulty re-attaching the trochanter where the femoral cement remains undisturbed; we also feel that removing the trochanter might interfere with an otherwise satisfactory cement–bone interface.

The following technique has been used in a small number of patients. Before operation the femoral cement–bone interface is investigated using radiographs and a bone scan; only those patients with no evidence of incipient loosening are considered for the technique. The exact design of prostheses also should be identified preoperatively.

Method. The hip joint is exposed without removing the trochanter. Having excised the pseudocapsule, the joint is dislocated using a large bone hook to avoid excessive force on the femoral component. The femoral component is then tapped out gently from the surrounding cement. Providing that no damage has been done to the component and there is no evidence of disruption of the cement bed, the canal is plugged with ribbon gauze while the acetabular revision is performed.

Once this has been satisfactorily completed, the gauze is removed and the original femoral component replaced in the cement bed. The joint is then reduced and the wound closed in the usual way.

Results. We have used this technique in seven patients since 1985 so that the long-term results are not known. So far, there has been no evidence of femoral loosening. Nor have we had any patient in whom an attempt at this operation has failed because the femoral cement has broken. In one earlier case, however, where the canal had not been plugged with gauze the femoral component could not be re-inserted and a smaller one had to be cemented into the old cement bed. The average operating time in our seven patients was just over two hours, the average amount of blood required was a little under two units, and the average stay in hospital was 16.6 days.

Discussion. The success of this type of revision depends on a number of factors. First, the cement–bone interface should be firm; secondly, the stem should not be excessively curved; thirdly, it should be smooth, without deep indentations, holes, or a roughened surface; and last, it must be possible to remove the stem without disrupting the cement. These criteria limit the number of prostheses that are suitable, but unless they are satisfied the technique should not be used; standard revision should be undertaken.

The advantages of this technique include the shorter operation time with consequent probable reduction in infection, and the reduced requirement for blood. The most important advantage is the preservation of the femoral bone stock, perhaps the most vital resource for any joint replacement.

We suggest that this technique should be considered for those patients with a prosthesis meeting the criteria outlined above, but stress that damage to the cement bed or the necessity to use excessive force in either dislocating the hip or removing the femoral component would necessitate a standard revision.

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

REFERENCES

