Comment on Bao et al.: Lesser trochanteric osteotomy in total hip arthroplasty for treating CROWE type IV developmental dysplasia of hip

Zhong Fang · Feng Li

Received: 12 February 2013 / Accepted: 15 February 2013 / Published online: 10 March 2013
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Dear Editor,

First we would like to congratulate Bao et al. [1] on the publication of the article entitled “Lesser trochanteric osteotomy in total hip arthroplasty for treating CROWE type IV developmental dysplasia of hip”. Although the technique of lesser trochanteric osteotomy has been well described in this study, there are still three problems which need to be further addressed by the authors:

1. The greater trochanter fracture. The technique of lesser trochanteric osteotomy includes sequential bone cutting at the level of the subtrochanteric diaphysis, while leaving the greater trochanter intact, as shown in Fig. 1 in [1] this article. It is likely to cause a greater trochanter fracture when the femoral stem is inserted, which is going to compromise the abductor attachment. How can the greater trochanter be protected from being broken?
2. The soft tissue tension. Subtrochanteric osteotomy has been demonstrated to be a safe and effective technique for soft tissue release in performing total hip arthroplasty (THA) for high dislocated developmental dysplasia of the hip (DDH). The neurovascular tissue is well protected as the femur is shortened when the femoral head is distalised and reduced into the true acetabulum [2]. In the technique described, however, the femoral length is in fact not reduced or shortened to a much lesser extent compared as a result of

subtrochanteric osteotomy. The soft tissue tension remains high after the reduction of the hip. How can the authors address the high soft tissue tension remaining and the low incidence of neurovascular injuries as reported in this article?

3. The anteversion angle of the acetabular cup and femoral stem. Due to the deformity of the acetabulum and proximal femur, it is not easy to determine the anteversion angle of the prostheses which is of vital importance in preventing dislocation of the hip. How are the prostheses set at a proper angle to construct a stable articulation?

We agree with the viewpoint that the lesser trochanteric osteotomy could be adopted to avoid subtrochanteric non-union when performing the step-cut or oblique osteotomy, but the proximal femur and abductor protecting technique needs to be advanced in future studies.

References

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Z. Fang · F. Li (✉)
Department of Orthopaedics, Tongji Hospital, Tongji Medical
College, Huazhong University of Science and Technology,
Wuhan, Hubei 430030, People's Republic of China
e-mail: hbwhlf@yahoo.com.cn