Reviewer's report

Title: Systematic Study of Coracoid Abnormalities and Their Relationship with Glenohumeral Deformities in Patients with Obstetric Brachial Plexus Injury

Version: 1 Date: 11 January 2010

Reviewer: Yrjänä Nietosvaara

Reviewer's report:

1. The question posed by the authors is not well defined.

Major Compulsory Revisions: They should present a study hypothesis e.g. coracohumeral distance (or subcoracoid space) diminishes with increasing glenoid deformity.

2. The methods are not appropriate. Inclusion and exclusion criteria to the study are not clearly documented.

Major Compulsory Revisions:
This study should have been performed by MRI which would have allowed direct measurements also on cartilaginous structures. This would have allowed measuring the real distance between the coracoid process and the humeral head. C-HH, C-S and also C-G are now measured from bony structures - this is suboptimal, potentially even misleading especially in small children. This should be at least mentioned in discussion.

Define better the studied patient population. 39 out of 294 operated children? Was a preoperative CT performed only to 39 of the 294 children? Demographic data of the 294 patients should be included so that a comparing between the study population could be made. The authors should document the number of children in different nerve injury groups. The age of the included patients varied between 2 to 13, median age?

3. The data are potentially not sound.

Major Compulsory Revisions:
Intra- and interrater errors should be included. The measurements using bony outlines are potentially erroneous at least in small children, especially C-HH.

5. The discussion and conclusions

Major Compulsory Revisions:
Potential errors and limitations of the study should be stated in the discussion. The authors have not studied if a deformed coracoid process interferes with repositioning the posteriorly subluxed humeral head - they should not include this statement in conclusions, it is merely a speculation.
6. Limitations of the work are not stated at all!
   Major Compulsory Revision: see to earlier comments.

8. The title should be shortened and the abstract rewritten:
   Major Compulsory Revision:
   Shorter title.
   Abstract with a study hypothesis and relevant conclusions.

9. The writing is acceptable.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests