Letter to the Editor: Mid-America Orthopaedic Association Physician in Training Award: Surgical Technique: Pediatric Supracondylar Humerus Fractures: A Technique to Aid Closed Reduction

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To the Editor:

We read the article by Herzog et al. [1] with great interest. We found the study interesting because the technique described by the authors is similar to our previously published article [2], referred by the authors in the *Introduction* and *Discussion* sections of their study. Although their “novel” technique is very similar to ours with the idea of controlling the external rotation, coronal tilt, and translation of the proximal fragment by using the “joy-stick” K-wire, there are some slight modifications in the technique, which we cannot clearly understand.

First, we would like to comment on a point raised by the study authors regarding the location and direction of the Schanz pin. In our original paper, we placed a K-wire

below the deltoid muscle insertion from lateral to medial direction. Our purpose in choosing this anatomical landmark was to expose the patient to the least risk of iatrogenic harm and minimal injury to muscular tissues. We think that a Schanz pin placed from posterior to anterior has the potential risk of damaging triceps muscle function, which should be avoided. Of course, a more distally placed joystick has the advantage of better control of the proximal fragment owing to the proximity of the pin to the fracture line, but in this age group there is no need to exert tremendous effort in controlling the fragment; we believe it is quite easy.

The second point we would like to comment on is the size of the Schanz pin used in the paper by Herzog and colleagues. In Table 1 of their study, we can see that the average age of the patients was 6.1 years with a range of 1.1 to 12.1 years. In our original paper, the mean age of the patients was 6.7 years (range; 4 to 10 years). We used a K-wire at the appropriate size depending on the age of the patient — usually 3.0 mm for the older children and 2.0 mm for the younger children. The authors, however, used a percutaneously placed 2.5 mm Schanz pin in every age group. If we understand the work correctly, this means that they used a 2.5 mm Schanz pin in a 1.1 year-old patient whose humerus most likely had a very narrow medullary canal. We wonder if they observed any iatrogenic humerus shaft fracture intra- or postoperatively; if not, it seems to us that using such a large pin would put a small humerus at risk for later fracture. We also would like to find out the number of patients younger than 2 years of age at the time of the study. After performing our original technique for nearly 20 years, we hardly ever needed to use the joystick technique in this age group.

The authors stated that the study included 143 patients who were divided into two groups depending on whether treatment occurred before (Group 1, 90 fractures) or after

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(Group 2, 53 fractures) implementation of the Schanz pin technique (to aid in closed reduction). However, in the *Results* section, the authors stated that one fracture treated with open reduction in Group 2 did not undergo the Schanz pin method before conversion to open reduction. We wonder why this patient was included in the study?

Even so, we think this Level-III research paper is an important contribution to the literature proving the reproducibility and safety of our Joystick method [2], which was published earlier as a case series. We therefore would like to thank the authors for their interest in our work.

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