

## Treatment of Idiopathic Clubfoot: Experience with the Soft Cast

O-092

郭建忠<sup>1,2</sup> 郭耿南<sup>3</sup> 許弘昌<sup>1</sup> 呂東武<sup>3</sup>  
國立台灣大學醫工所<sup>1</sup> 中國醫藥大學附設醫院<sup>2</sup> 國立台灣大學附設醫院<sup>3</sup>

**Introduction:** The current trend of management of congenital clubfoot has been manipulation and Plaster of Paris casting by Ponseti technique. It is the purpose of this study to compare the use of soft cast (SC) to Plaster of Paris (POP) in efficacy of treatment of clubfoot and friendliness of soft cast as the initial management.

**Materials and Methods:** During two years period, there were consecutive 30 patients (40 clubfeet) treated at our hospital using Ponseti method. Patients were randomized into two groups, POP and SC, based on medical recorder number. We used Dimeglio and Bensahel classification for pretreatment severity score. Achilles tenotomy was performed in those with sagittal plane score of more than 2 points. At the completion of Ponseti treatment, the severity was recorded by the same classification. Questionnaires were provided at each clinic visit to monitor the complications and parent satisfaction. We used independent t-test for statistical analysis with  $p < 0.05$  as significant.

**Results:** Thirty clubfeet in 30 patients were enrolled in the study. Of these, 14 patients (18 feet) completed POP, and 16 patients (22 feet) received SC. The mean baseline and final severity scores of the 2 groups were not significantly different. The incidence of Achilles tenotomy was significantly lower in SC group than POP group (57% vs 100%). From questionnaire, there was a trend toward higher scores for cast tolerance, durability, and parent satisfaction in the SC group (4.05 vs 3.16, 1 = unsatisfactory).

**Discussion:** This study supports the use serial casting with SC for clubfoot. There was a trend toward higher parent satisfaction in the SC group. Incidence of percutaneous Achilles tenotomy was lower in SC group. With less padding and skin tight soft casting, we may have better feeling of the position of the foot in the cast. Hence, a better correction may ensure. However, this difference on long-term outcomes and recurrence remains to be studied.

以後外側入路治療兒童肱骨外髁骨折  
Posterolateral Approach for Humeral Lateral Condylar Fracture

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劉昌恒 李偉群 高軒楷 楊文一 張嘉獻  
林口長庚醫院

**Introduction:** The humeral lateral condylar fracture is one of the few fractures in children that often require surgical intervention. Lateral approach is commonly recommended in open reduction of the lateral condylar fracture, however, reduction of articular surface is hard to visualize. We present our experience of using posterolateral approach and diverging K wires fixation.

**Materials and Methods:** A retrospective review of humeral lateral condylar fractures treated from July 2006 to October 2011 was performed after IRB approved. There were 39 cases treated by posterolateral approach. The approach went between triceps and anconeus to posterior aspect of the elbow joint. After restoring articular surface, one K wire was inserted horizontally in epiphysis to secure the joint surface. Another K wire diverged from the first K wire to fix the fracture further. Range of elbow motion and radiological evidences of avascular necrosis, physis injury, and nonunion were investigated in at least 2 years follow up.

**Results:** There were 10 type II and 29 type III lateral condylar fractures. All of them united and the subcutaneous K wires were removed 3-4 months after operation. Carrying angle was symmetric, but loss of terminal range of flexion by 10-15 degrees was not uncommon compared to the uninjured side. At the latest follow-up, there was no avascular necrosis or epiphyseal scarring of lateral condyle.

**Discussion:** Posterior approach was regarded as a contraindication because vascular supply to lateral condyle was posterior. By preserving anconeus and common extensor muscle attachment, we found posterolateral approach is a safe and simple method to visualize and reduce articular surface that we believe a critical point in open reduction. Diverging K wires offer adequate stability that metaphyseal screw is not required. We recommend this simple approach via a small wound over posterior aspect of the elbow.