

Analisis luaran klinis, fungsional dan radiologis malunion fraktur suprakondiler humerus pasca osteotomi korektif di Rumah Sakit Umum Pusat Dr.Cipto Mangunkusumo tahun 2012-2017 = Analysis of clinical, functional and radiological outcomes of supracondylar humerus malunion post corrective osteotomy in Cipto Mangunkusumo General Hospital 2012-2017

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Abstrak

Pendahuluan: Malunion adalah komplikasi jangka panjang yang sering terjadi pada fraktur suprakondiler humerus yang bila tidak ditatalaksana dengan tepat dapat menimbulkan komplikasi yang dapat menurunkan kualitas hidup pasien. Osteotomi korektif dengan teknik lateral closed wedge osteotomy, merupakan teknik yang sering digunakan karena sederhana dan relatif mudah. Studi mengenai luaran klinis, fungsional dan radiologis pasca osteotomi korektif masih sedikit, khususnya di Indonesia. Metode: Penelitian ini menggunakan desain kohort retrospektif, dengan metode total sampling pada tahun 2012-2017 di Rumah Sakit Pusat Nasional Cipto Mangunkusumo. Dilakukan penilaian luaran klinis dengan Mitchell and Adams Criteria, luaran fungsional dengan Mayo Elbow Performance Score (MEPS), dan luaran radiologis dengan Baumann Angle, Metaphyseal-diaphyseal angle, Humero-ulnar angle, Humero-capitellar angle, dan anterior humeral line pra dan pascaoperasi. Hasil: Terdapat 15 pasien yang diikuti sertakan dalam penelitian dengan umur rata-rata 7,7 tahun, mayoritas laki-laki dan pada sisi sebelah kiri. Median interval waktu antara fraktur hingga osteotomi korektif adalah 11,2 bulan dengan rata-rata followup adalah 24,9 bulan. Luaran klinis berdasarkan Mitchell and Adams criteria didapatkan kriteria good hingga excellent sebanyak 14 pasien (93,3%) dan hanya 1 pasien (6,7%) dengan hasil unsatisfactory. Luaran fungsional berdasarkan MEPS didapatkan kategori good hingga excellent sebanyak 14 pasien (93,3%), dan kategori fair sebanyak 1 pasien (6,7%). Terdapat perbaikan parameter radiologis yang bermakna yang diukur dengan baumann angle, metaphyseal-diaphyseal angle, humero-ulnar angle, humero-capitellar angle dan anterior humeral line. Terdapat korelasi yang kuat antara perbaikan baumann angle dengan Mitchel and Adams criteria dan terdapat korelasi yang moderat antara perbaikan metaphyseal-diaphyseal angle dengan MEPS. Kesimpulan: Tindakan osteotomi korektif dengan teknik lateral closed wedge osteotomy pada malunion fraktur suprakondiler humerus memberikan luaran klinis, fungsional dan radiologis good hingga excellent. Baumann angle dan Metaphyseal-diaphyseal angle dapat digunakan sebagai parameter untuk memprediksi luaran klinis dan fungsional pasca osteotomi korektif.

.....Introduction: Malunion is a late complication that often occurs after supracondylar humeral fractures. This condition if not managed properly will cause such complications that potentially reduce the patient's quality of life. Corrective osteotomy by lateral closed wedge osteotomy is a technique that is often used due to its simplicity and relatively easy. Only few studies have reported clinical, functional and radiological outcomes in cases of malunion of supracondylar humeral fractures after corrective osteotomy, particularly in Indonesia. Methods: This study used a retrospective cohort design, with a total sampling method in period of 2012-2017 at the Cipto Mangunkusumo Central National Hospital. We assess clinical outcome by Mitchell and Adams Criteria, functional outcome by Mayo Elbow Performance Score (MEPS), and radiological

outcomes by Baumann Angle, Metaphyseal-diaphyseal angle, Humero-ulnar angle, Humero-capitellar angle, and anterior humeral line, pre and postoperatively Results: There were 15 patients included in the study with an average age of 7.7 years, the majority were men and affected on the left side. The median of time interval between fracture to correction osteotomy was 11.2 months with a mean time of follow-up was 24.9 months. Clinical outcome after correction osteotomy based on Mitchell and Adams criteria showed good to excellent criteria as many as 14 patients (93.3%) and only 1 patient (6.7%) with unsatisfactory results. While the functional outcomes based on MEPS showed good to excellent categories of 14 patients (93.3%), and the fair category was 1 patient (6.7%). There were a significant radiological improvement measured by baumannn angle, metaphyseal-diaphyseal angle, humero-ulnar angle, humero-capitellar angle and anterior humeral line. There was a strong correlation between baumann angle improvement with Mitchel and Adams criteria and there was a moderate correlation between the improvement of Metaphyseal-diaphyseal angle and MEPS. Conclusion: Corrective osteotomy by lateral closed wedge osteotomy on malunion supracondylar humeral fracture showed good to excellent clinical, functional and radiological outcomes. Baumann angle and Metaphyseal-diaphyseal angle can be used as parameter to predict clinical and functional outcomes after corrective osteotomy.