ORIGINAL ARTICLE

The medial-first approach in unstable pediatric supracondylar humerus fractures: association with reduced need for additional exposure and improved cosmetic outcomes

Kutalmis Albayrak, Gorkem Kayis, Muhammed Bilal Kurk, Sefa Seluk, Baris Ozkul, Evren Akpinar[1]

Department of Orthopaedics and Traumatology, University of Health Sciences, Baltalimani Bone Diseases Training and Research Hospital, Istanbul-*Türkiye*

ABSTRACT

BACKGROUND: This study aimed to compare the clinical, cosmetic, and surgical outcomes of medial-first and lateral-first open reduction approaches in the treatment of unstable pediatric supracondylar humerus fractures when closed reduction fails.

METHODS: In this retrospective comparative study, 68 pediatric patients (aged 2–10 years) with Gartland Type III and IV supracondylar humerus fractures requiring open reduction were evaluated. Patients were divided into two groups based on the initial surgical approach: medial-first (n=31) and lateral-first (n=37). Demographic characteristics, surgical time, pin configuration, range of motion, Flynn's functional and cosmetic outcomes, and postoperative complications were compared between groups.

RESULTS: The medial-first group demonstrated significantly shorter surgical times (55.5±16.0 vs. 72.0±20.2 minutes, p<0.001) and superior cosmetic outcomes (excellent cosmetic Flynn's scores in 83.9% vs. 62.2%, p=0.0408). The need for an additional incision was markedly higher in the lateral-first group (0 vs. 18 patients, p<0.00001). Functional outcomes and complication rates were comparable between groups.

CONCLUSION: The medial-first approach in unstable pediatric supracondylar humerus fractures offers advantages in surgical efficiency and cosmetic outcomes while minimizing the need for secondary incisions. It represents a safe and effective option for achieving stable fixation when closed reduction is unsuccessful.

Keywords: Pediatric supracondylar humerus fracture; open reduction; Flynn's criteria; medial approach; lateral approach; cosmetic outcome.

INTRODUCTION

Pediatric supracondylar humerus fractures (SCHFs) are among the most common elbow injuries in children and typically result from a fall onto an outstretched hand.[1] While nonoperative management is appropriate for nondisplaced fractures (Gartland Type I), displaced fractures (Types II-IV) generally require surgical intervention, with closed reduction and percutaneous pinning (CRPP) being the preferred treatment method.[2] However, due to the severity of trauma, significant displacement may occur, which can also lead to soft-tissue interposition, rendering closed reduction unsuccessful in approximately 2-15% of cases according to the literature.[3] In such scenarios, open reduction is often required to restore

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Address for correspondence: Kutalmis Albayrak
Department of Orthopaedics and Traumatology, University of Health Sciences, Baltalimani Bone Diseases Training and Research Hospital, Istanbul, Türkiye
E-mail: kutalmisalbayrak@gmail.com
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anatomical alignment and achieve stable fixation.[4,5]

The surgical approach for open reduction remains a topic of ongoing debate. Although lateral pinning alone is biomechanically sufficient in many cases, bicolumnar (crossed medial-lateral) pinning provides greater rotational and varus/valgus stability, particularly in unstable fractures (Gartland Types III and IV).[6] However, medial pinning carries a risk of iatrogenic ulnar nerve injury, especially when anatomical landmarks are obscured by soft-tissue swelling.[7] To mitigate this risk, some authors recommend a small medial incision for direct visualization and protection of the nerve during pin placement.[8,9]

Given these considerations, the choice of surgical approach in cases requiring open reduction remains controversial. Furthermore, when open reduction is necessary, there is no clear consensus on the optimal surgical approach. Surgeons frequently prefer the lateral approach due to its familiarity and ease of access; however, this technique may limit visualization of the medial column, potentially resulting in malreduction[11] (e.g., cubitus varus) or suboptimal cosmetic outcomes. Eren et al.[12] reported higher patient satisfaction in the medial-open group compared to the lateral-open group in their studies. A recent study also suggests that medial or anterior approaches may provide better functional and cosmetic results with lower complication rates.[13]

Despite literature supporting surgeon-dependent approach selection,[14-16] we propose that a medial-first open approach for treating unstable SCHFs (Types III/IV) offers distinct advantages:

1. Minimizes the need for combined approaches: Lateral-first techniques often fail to adequately reduce the medial column, necessitating secondary medial exposure.

2. Enhanced safety and efficiency: Direct ulnar nerve visualization minimizes iatrogenic injury, while improved alignment reduces operative time.

3. Improved outcomes: Anatomic reduction and stable bicolumnar fixation may lower complication rates (e.g., malunion) and enhance cosmetic outcomes.

Although there are numerous studies in the literature on pediatric supracondylar humerus fractures, very few include sufficient follow-up periods to compare medial and lateral open approaches and comprehensively address their outcomes.

Therefore, in this study, we hypothesize that a medial-first strategy optimizes biomechanical stability and clinical outcomes in unstable supracondylar humerus fractures by reducing the need for combined approaches, enhancing safety through direct neurovascular visualization, and improving fracture alignment efficiency.

MATERIALS AND METHODS

Ethical approval was obtained from the Institutional Review Board (Approval No: [28/192]), and written informed consent was obtained from the legal guardians of all pediatric participants, in accordance with the principles of the Declaration of Helsinki. This research is a single-center, retrospective comparative study involving multiple surgeons. A retrospective evaluation was performed on 631 pediatric patients who were diagnosed with supracondylar humerus fractures at our hospital between 2014 and 2023. The inclusion criteria were as follows:

1. pediatric patients between the ages of 2-10 years,

2. patients who underwent open reduction after attempted closed reduction due to inadequate fracture alignment,

3. patients in whom a medial incision was used as the first incision, and

4. patients in whom a lateral incision was used as the first incision.

The indication for open reduction was the failure of closed reduction attempts, depending on the surgeon's decision and experience. Patients with concomitant fractures, open fractures, vascular injuries in the same extremity, or diagnosed compartment syndrome at presentation were excluded from the study, as were those with a history of previous fractures around the elbow joint. The minimum follow-up period in this study was two years, and patients who did not complete follow-up before this time were excluded from the study. The study flowchart is presented in Figure 1.

Patients were divided into two groups: those who underwent a medial incision (medial-first group) as the initial open approach and those who underwent a lateral incision (lateral-first group). Cases in which a secondary incision was used during surgery, such as a mini-open medial approach to protect the ulnar nerve during pin placement, were also noted.

Data Collection

The demographic, intraoperative, and follow-up data of all patients were analyzed. The collected variables included age, gender, affected side, Body Mass Index, and Gartland classification. Both intraoperative complications and early or late postoperative complications-including infection, range-of-motion limitations, nonunion, deformity, loss of reduction, and heterotopic ossification with clinical manifestations-were documented. Additionally, the pin configuration used for fixation was recorded.

Joint range of motion was assessed using a goniometer at one year postoperatively and at the final follow-up visit. Baumann's angle was measured from radiographs obtained within the first postoperative year. Pin tract infections and nerve injuries were evaluated based on outpatient follow-up records.

A standardized postoperative follow-up protocol was implemented for all patients. A long arm splint was applied immediately after surgery and removed within three weeks to allow elbow mobilization. Patients were instructed to per-

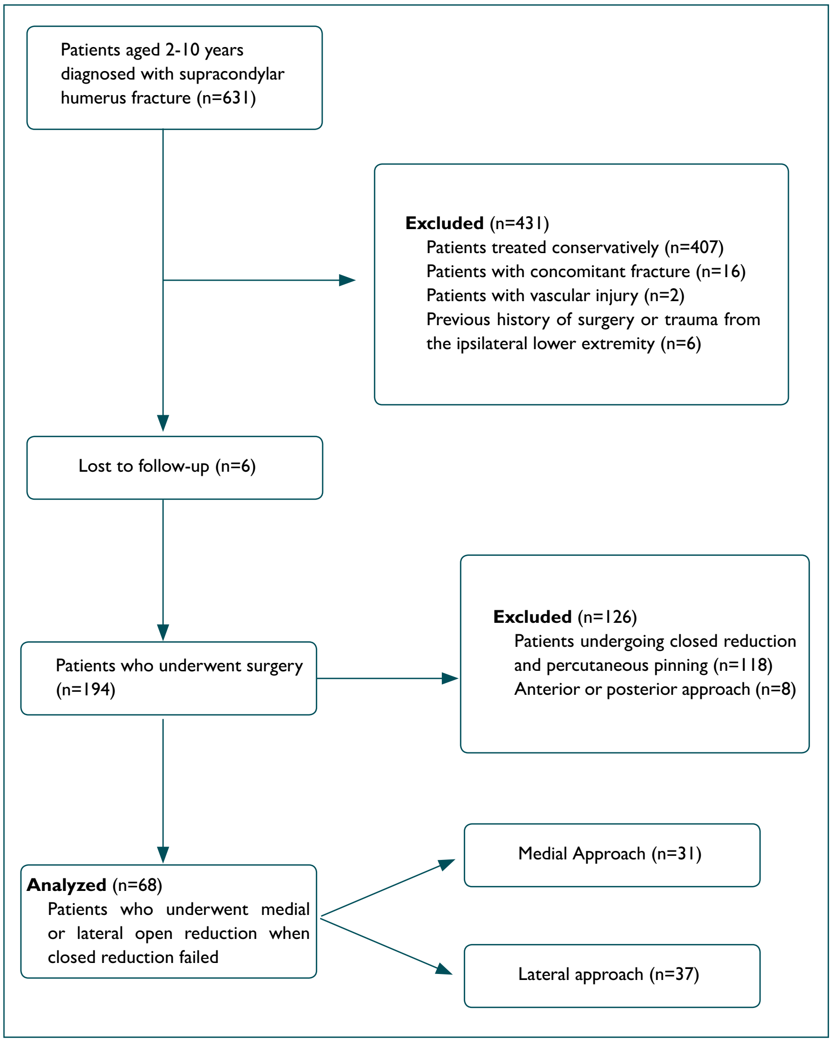

Figure 1. Study flowchart.

form daily pin care throughout the follow-up period. The pins were removed approximately four weeks postoperatively, after callus formation was confirmed on standard anteroposterior and lateral radiographs. Routine radiographic and clinical follow-up assessments were conducted at the fourth and sixth weeks, as well as at the third, sixth, and twelfth months postoperatively.

The final assessment was conducted based on Flynn's criteria, which evaluate both cosmetic and functional outcomes. Cosmetic outcomes were determined by the degree of loss in the carrying angle, while functional outcomes were assessed based on the degree of motion loss. According to Flynn's classification, a loss of 0-5° is considered excellent, 6-10° good, 11-15° fair, and ≥16° poor. The evaluations based on Flynn's criteria were performed at the 12-month postoperative follow-up. After the first year, patients were monitored for late complications and routine fracture follow-up, including poor union progression, remodeling, heterotopic ossification, or cubitus varus.

Surgical Technique

All operations were performed by experienced surgeons using lateral, medial, or combined approaches. Fluoroscopic-guided closed reduction and percutaneous pinning were initially attempted in all patients. In cases where adequate reduction could not be achieved through closed reduction, an open surgical approach was performed. All open procedures were conducted under general anesthesia with the patient positioned supine on a radiolucent table, and a sterile tourniquet was applied prior to surgery. Standard prophylaxis with a first-generation cephalosporin was administered to all patients 30 minutes preoperatively, with dosages adjusted according to age and weight.

In the medial-first group, the medial approach was initiated with a skin incision extending from 5 cm proximal to the medial epicondyle to the distal joint line. The ulnar nerve was identified and carefully protected. The incision traversed the intermuscular septum to expose the distal humerus. (Fig. 2). In the lateral-first group, a lateral approach was used, with a

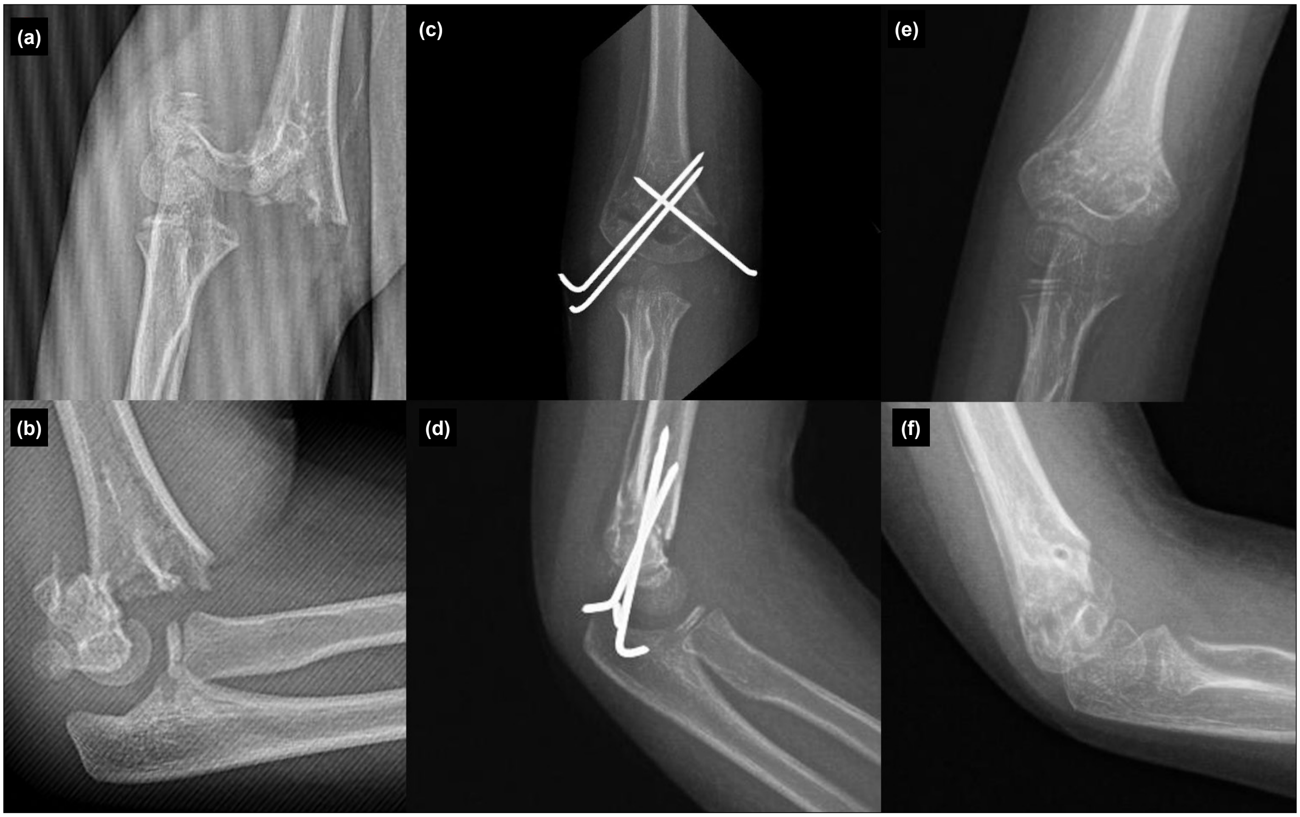

Figure 2. Preoperative, postoperative, and follow-up anteroposterior and lateral radiographs of a patient who underwent surgery using the medial-first approach.

skin incision extending from approximately 2 cm proximal to 1 cm distal to the lateral epicondyle. To visualize the lateral border of the humerus, the interval between the extensor carpi radialis longus, triceps brachii, and brachialis muscles was utilized (Fig. 3).

In the medial-first approach group, lateral pinning was performed percutaneously. In the lateral- first approach group, medial pinning was performed either percutaneously or via an additional medial incision, during which the ulnar nerve was meticulously identified and protected.

Statistical Analysis

Statistical analysis was performed using IBM SPSS Statistics 22 (IBM SPSS Corp., Armonk, NY, USA). The Shapiro–Wilk test was employed to assess the normality of continuous variables, which were determined to follow a normal distribution. Descriptive statistics were presented as mean ± standard deviation for continuous variables, while categorical variables were reported as frequencies and percentages.

For comparisons involving quantitative data and normally distributed variables, a one-way analysis of variance (ANOVA) was performed. Categorical data were analyzed using the chi-square test. A P-value of <0.05 was considered statistically significant.

RESULTS

Patient Demographics

A total of 68 patients were included in the study, with 31 patients in the medial-first group and 37 in the lateral-first group. Baseline demographic and clinical characteristics of the study groups are presented in Table 1. No significant differences were found in baseline demographics between the two groups. There was also no statistically significant difference between the groups in terms of displacement direction (p=1.000). The mean follow-up duration was comparable (70.2±21.0 vs. 66.4±25.2 months, p=0.631).

The mean surgical time was significantly shorter in the medial-first group compared to the lateral-first group (55.5±16.0 minutes vs. 72.0±20.2 minutes, p<0.001). Baseline demographic and clinical characteristics of the study groups are presented in Table 1.

Clinical and Functional Outcomes

Mean flexion loss was 2.7°±1.6 in the medial-first group and 3.0°±2.0 in the lateral-first group (p=0.144), while mean extension loss was 4.5°±2.3 and 5.8°±3.1, respectively (p=0.216).

According to Flynn's functional criteria, excellent or good

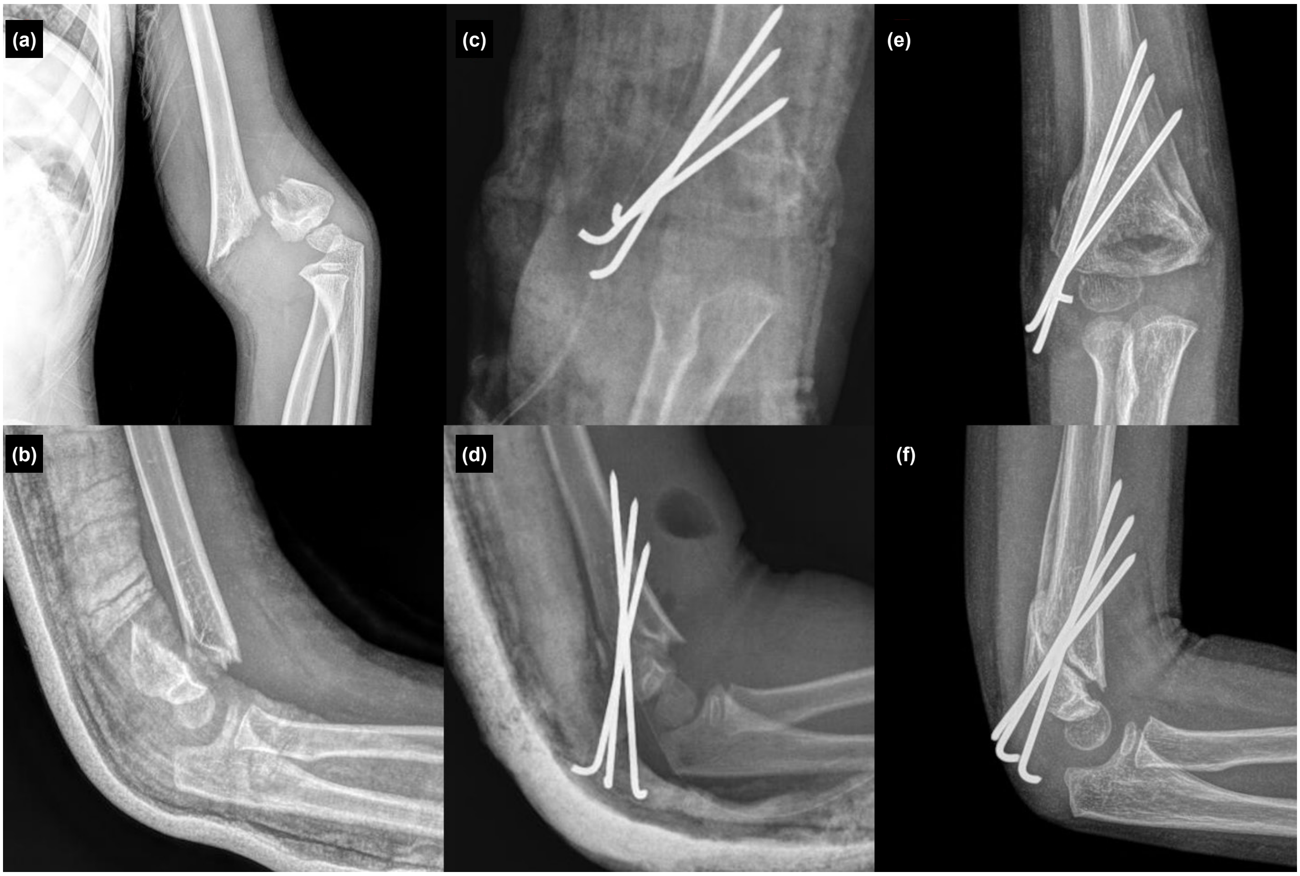

Figure 3. Preoperative, postoperative, and follow-up anteroposterior and lateral radiographs of a patient who underwent surgery using the lateral-first approach.

Table 1. Patient demographics and baseline characteristics

Variable	Medial-First Group (n=31)	Lateral-First Group (n=37)	p-value
Age (years, mean±SD)	5.3±2.6	5.6±3.4	0.0974
Sex (Male/Female)	18/13	22/15	1
BMI (mean±SD)	16.8±2.4	16.2±3.2	0.777
Side (Right/Left)	19/12	23/14	1
Gartland Type III	11 (35.5%)	14 (37.8%)	1
Gartland Type IV	20 (64.5%)	23 (62.2%)	1
Follow-up duration (mean, months)	70.2±21.0	66.4±25.2	0.631
Surgical Time (mean, minutes)	55.5±16.0	72±20.2	<0.0001

outcomes were achieved in 96.8% of the medial group and 91.9% of the lateral group (p=0.6779), with no cases classified as poor in either group.

In contrast, Flynn's cosmetic outcomes showed a statistically significant difference between groups (p=0.0408). Excellent cosmetic results were obtained in 83.9% of the medial-first group versus 62.2% of the lateral-first group, while fair cosmetic outcomes were observed only in the lateral group (16.2%) (Fig. 4).

Regarding pin configuration, all patients in the medial-first group received medial + lateral pinning (100%), whereas this configuration was used in only 56.7% of the lateral-first group.

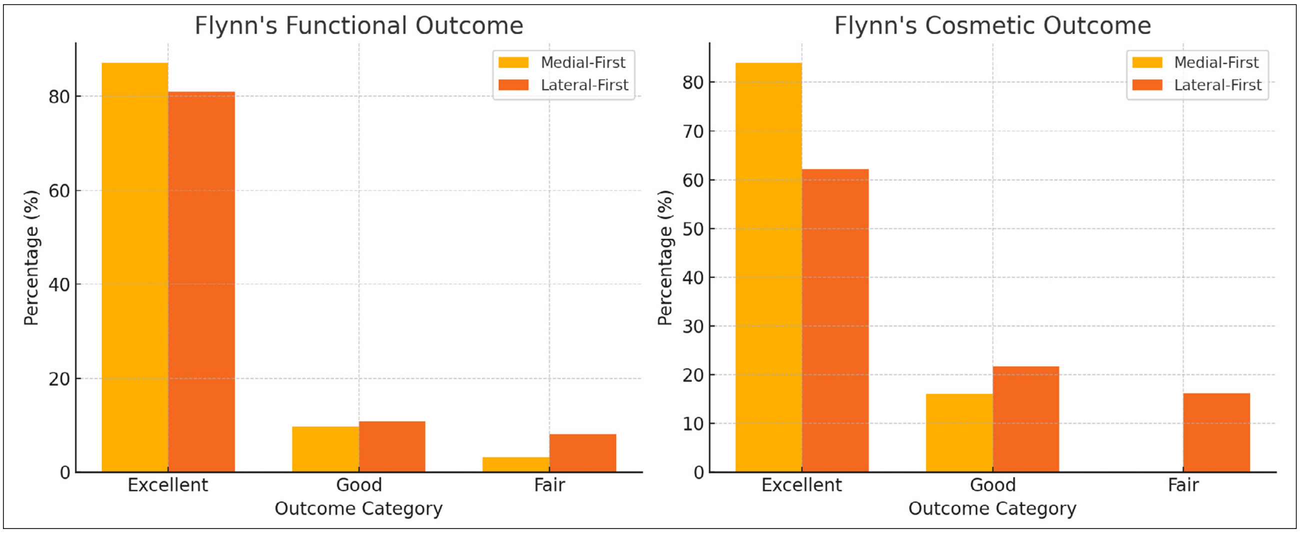

Figure 4. Distribution of functional and cosmetic outcomes according to Flynn's criteria in medial-first and lateral-first approaches.

Table 2. Clinical and functional outcomes

Outcome Measure	Medial-First Group (n=31)	Lateral-First Group (n=37)	p-value
Flexion loss (°, mean±SD)	2.7°±1.6	3.0°±2.0	0.144
Extension loss (°, mean±SD)	4.5°±2.3	5.8°±3.1	0.216
Flynn's Functional Outcome (%)			0.6779
Excellent (0-5°)	27 (87.1%)	30 (81.1%)	
Good (6-10°)	3 (9.7%)	4 (10.8%)	
Fair (11-15°)	1 (3.2%)	3 (8.1%)	
Poor (≥16°)	-	-	
Flynn's Cosmetic Outcome (%)			0.0408
Excellent (0–5°)	26 (83.9%)	23 (62.2%)	
Good (6–10°)	5 (16.1%)	8 (21.6%)	
Fair (11–15°)	-	6 (16.2%)	
Poor (≥16°)	-	-	
Pin Configuration			
Medial+Lateral	31 (100%)	21 (56.7%)	0.0002
Two Lateral Pins	0	9 (24.3%)	0.0029
Three Lateral Pins	0	7 (18.9%)	0.0133

The remaining lateral-first group patients were treated with either two (24.3%) or three (18.9%) lateral pins. The differences in pin configuration between groups were statistically significant (p=0.0002 for medial + lateral vs. others, p=0.0029 for two lateral, and p=0.0133 for three lateral pin configurations). Clinical and functional outcomes, including range of motion, Flynn's scores, and pin configuration, are summarized in Table 2.

Complications

A low overall rate of complications was observed, with specific adverse events distributed across both groups as follows: pin tract infections occurred in two patients in the medial group and one in the lateral group (p=0.588). Ulnar nerve injury was observed in two patients in the lateral-first group, while no such cases occurred in the medial-first group (p=0.496). In both patients who showed clinical signs of early

Table 3. Complications

Complication Type	Medial-First Group (n=31)	Lateral-First Group (n=37)	p-value
Pin tract infection	2	1	0.588
Ulnar nerve injury	0	2	0.496
Loss of reduction	0	2	0.496
Heterotopic ossification	1	1	1
Nonunion	0	0	1
Additional incision	0	18	<0.0001
Revision surgery	0	2	0.496

postoperative ulnar nerve impairment, open reduction had been performed via the lateral approach, and the medial pin was inserted percutaneously. On the following day, in one patient, the medial pin was removed due to signs of ulnar nerve irritation. The other patient underwent reoperation the following day for ulnar nerve exploration, during which the medial pin was replaced. Similarly, loss of reduction was reported in two patients in the lateral-first group and in none of the medial-first group (p=0.496). The medial pin was not used in either of these patients. However, no additional intervention was performed for loss of reduction, and the patients were followed throughout the remodeling process. Heterotopic ossification occurred in one patient per group (p=1.000), and there were no cases of nonunion.

The need for an additional incision during surgery was significantly more common in the lateral-first group (0 vs. 18 patients, p<0.00001). Among the patients who required an additional incision, a secondary medial incision was used to safely place the medial pin in 7 of 18 patients, while in 11 patients, an additional medial incision was necessary because reduction was not successful using the lateral approach alone. One patient in the lateral group required revision surgery, whereas no revisions were necessary in the medial group. One patient underwent revision surgery the following day due to postoperative ulnar nerve symptoms. No new complications were observed during the long-term follow-up period. The incidence and distribution of postoperative complications in both groups are detailed in Table 3.

DISCUSSION

The most important finding of our study is that the medial-first approach reduces the need for dual incisions in unstable supracondylar humerus fractures. In addition, it was observed that more medial pins were used in patients treated with the medial approach, as the concern for ulnar nerve injury was eliminated. Loss of reduction was also less frequent in the medial-first group throughout the follow-up period.

The treatment strategy for unstable supracondylar humerus fractures in which proper alignment cannot be achieved with closed reduction is controversial. Recent biomechanical studies have shown that the use of bicolumnar pins provides the most stable fixation in unstable supracondylar humerus fractures. From this perspective, the effect of medial pin use on stability in these patients is clear. When the medial-first approach is used, there is no concern about adding lateral pins or the number of medial pins. This allows the use of as many pins as needed to increase stability.

On the other hand, when the lateral-first approach is used, it is necessary either to protect the ulnar nerve with a medial incision or to accept the risk of closed medial pin placement in a swollen arm with poorly defined landmarks. The third alternative is to complete the surgery with lateral pins only, without placing a medial pin, resulting in a less stable fixation. In our series, greater loss of reduction was observed in the patient group in which only lateral pins were used.

Loss of carrying angle has been reported as the most common complication of the lateral open approach.[12,13] In the systematic review by Gonzalez-Morgado et al.,[13] the posterior and lateral approaches were associated with a higher relative risk (RR) for unsatisfactory cosmetic Flynn's scores compared to the medial approach. The medial and anterior approaches showed a lower RR for unsatisfactory cosmetic results. They reported that a possible explanation for this finding is that these approaches provide better exposure of the medial column and facilitate correction of internal rotation of the distal fragment, which contributes to loss of the carrying angle and varus deformity. In our study, we observed better cosmetic scores and less loss of carrying angle in the medial-first group.

Kizilay et al.[17] compared open approaches used when closed reduction failed in their study. They reported that the medial and lateral approaches yielded better cosmetic and functional results than the posterior approach, while the medial approach showed the best results according to the Flynn score after closed reduction. In our study, we also observed that the medial approach was associated with better results in terms of Flynn scores compared to the lateral approach. However, the main point we want to emphasize in our study is that when the medial approach is used, there is no need for an additional incision, whereas when the lateral approach is used, an additional incision is required for both medial column reduction and medial pin placement.

Another important aspect involves the differences in the trabecular bone structure of the distal humerus. Diederichs et al.[18] found the lowest trabecular bone density in the capitellum region and reported high trabecular bone density on the medial side. Therefore, it can be predicted that medial pins will provide greater stability than lateral pins. Consequently, the medial approach facilitates medial pin placement, which is a significant advantage. In our study, we observed poorer outcomes in patients who did not receive medial pins.

Although several studies support selecting the surgical approach based on the direction of fracture displacement, a more nuanced view suggests that the incision should be made on the side of maximum soft-tissue injury rather than strictly following the displacement pattern.[13] In many cases, soft-tissue trauma does not perfectly align with the direction of the metaphyseal spike seen on radiographs. For instance, in many fractures, the medial periosteum and soft tissues are often disrupted, making a medial approach more logical and potentially facilitating reduction.[12,13] Conversely, if lateral soft-tissue injury is more severe, a lateral approach may be preferable.[19] This perspective emphasizes that surgical access through the injured side may be more physiologic and technically effective, as attempting reduction from the intact side can increase the risk of further soft-tissue damage and may complicate the procedure. However, in our study, no statistically significant difference was observed between posteromedial and posterolateral displacement patterns in terms of the chosen surgical approach. Furthermore, there was no apparent correlation between the direction of soft-tissue injury and the type of incision performed.

Eren et al.[12] reported that the medial incision was cosmetically preferred when patients were asked about their satisfaction. They concluded that the medial approach is more appropriate for displaced supracondylar humerus fractures because of the lower incidence of ulnar nerve injury and less cubitus varus deformity due to accurate evaluation of the medial column. Our results also suggest that the medial approach provides better cosmetic outcomes as well as proper postoperative alignment and stability.

Yavuz et al.,[20] in a multicenter study comparing four different surgical approaches, reported that each approach yielded similar results. They suggested that the choice of approach should be based on surgical experience. However, surgical time was not included in their analysis. In our series, the medial-first approach was statistically significantly shorter in surgical time compared to the lateral-first approach. An important reason for this was likely that no additional incision was required during surgery. In addition, percutaneous placement of lateral pins after medial pin placement may be relatively easier.

This study had some limitations. First, although the overall study population was large (631 patients), we applied strict exclusion criteria to include only unstable patients who required open reduction, resulting in a relatively small final study group of 68 patients across both groups. Second, the retrospective nature of the study introduces some selection bias. The decision regarding incision type and pin configuration was made by the treating surgeon, with potential variability between individual assessments. Third, the decision to convert from closed to open reduction was also surgeon-dependent, and it was not possible to determine which incision group had more unstable fractures. In our clinic, closed reduction and percutaneous pinning are routinely preferred as the first-line treatment for all supracondylar humerus fractures. It is standard practice to attempt closed reduction initially and proceed to open reduction only if the closed approach fails. However, we acknowledge that the threshold for converting to open reduction may vary among surgeons, and some may opt for open reduction more readily in cases where they are not fully satisfied with the alignment achieved through closed techniques. This variation in clinical decision-making may represent a limitation in the generalizability of our findings. Finally, since no surgeon in our clinic routinely uses an anterior incision in patients without vascular injury, the anterior approach is reserved only for cases with suspected vascular injury. In our study, patients with vascular injury who underwent the anterior approach were excluded; therefore, it was not possible to compare the anterior approach with other techniques. Although our study addresses some important questions despite these limitations, multicenter prospective randomized controlled trials with larger cohorts comparing different approaches are needed to validate these findings and further investigate outcomes in this challenging fracture type.

CONCLUSION

In the surgical management of unstable supracondylar humerus fractures requiring open reduction, our findings suggest that the medial-first approach offers notable clinical advantages over the lateral-first approach. This technique not only reduces the need for additional incisions but also facilitates safe and effective medial pin placement, contributing to enhanced construct stability and fewer cases of reduction loss. Moreover, better cosmetic outcomes and shorter operative times were observed in the medial-first group. These results support the preference for the medial approach in cases where closed reduction is unsuccessful, given its contribution to stable fixation, improved alignment, and patient satisfaction. Nevertheless, the potential benefits of the surgeon's experience and familiarity with a particular approach should not be overlooked.

Ethics Committee Approval: This study was approved by the University of Health Sciences Baltalimani Bone Diseases Training and Research Hospital Ethics Committee (Date: 28.10.2024, Decision No: 28/192).

Informed Consent: Written informed consent was obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions: Concept: K.A., E.A.; Design: K.A., E.A.; Supervision: E.A., B.O.; Resource: G.K., M.B.K.; Materials: S.S., G.K.; Data collection and/or processing: G.K., B.O.; Analysis and/or interpretation: M.B.K., B.O.; Literature review: S.S., G.K.; Writing: K.A.; Critical review: B.O., E.A.

Conflict of Interest: None declared.

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ORİJİNAL ÇALIŞMA - *ÖZ*

Stabil olmayan pediatrik suprakondiler humerus kırıklarında medial-öncelikli yaklaşım: Ek insizyon gereksiniminin azalması ve kozmetik sonuçlardaki iyileşme ile ilişkisi

AMAÇ: Kapalı redüksiyonun başarısız olduğu durumlarda, instabil pediatrik suprakondiler humerus kırıklarının tedavisinde medial-öncelikli ve lateral-öncelikli açık redüksiyon yaklaşımlarının klinik, kozmetik ve cerrahi sonuçlarını karşılaştırmak.

GEREÇ VE YÖNTEM: Bu retrospektif karşılaştırmalı çalışmada, açık redüksiyon gerektiren Gartland Tip III ve IV suprakondiler humerus kırığı tanısı almış, 2-10 yaş aralığındaki 68 pediatrik hasta değerlendirildi. Hastalar, uygulanan ilk cerrahi yaklaşıma göre iki gruba ayrıldı: Medial-öncelikli (n=31) ve lateral-öncelikli (n=37). Demografik özellikler, cerrahi süresi, pin konfigürasyonu, eklem hareket açıklığı, Flynn'ın fonksiyonel ve kozmetik sonuçları ile postoperatif komplikasyonlar gruplar arasında karşılaştırıldı.

BULGULAR: Medial-öncelikli grupta cerrahi süre anlamlı düzeyde daha kısa bulundu (55.5±16.0 dakika ve 72.0±20.2 dakika, $p<0.001$) ve kozmetik sonuçlar daha üstündü (Flynn'ın kozmetik skorunda mükemmel sonuç oranı: %83.9 ve %62.2, $p = 0.0408$). Ek bir insizyon ihtiyacı lateral-öncelikli grupta belirgin şekilde daha fazlaydı (0 ve 18 hasta, $p<0.00001$). Fonksiyonel sonuçlar ve komplikasyon oranları ise gruplar arasında benzerdi.

SONUÇ: Kapalı redüksiyonun yetersiz kaldığı instabil pediatrik suprakondiler humerus kırıklarında medial-öncelikli yaklaşım, cerrahi etkinlik ve kozmetik sonuçlar açısından avantaj sağlamakta ve ek insizyon ihtiyacını azaltmaktadır. Bu yaklaşım, stabil fiksasyon sağlamak için güvenli ve etkili bir seçenek olarak değerlendirilebilir.

Anahtar sözcükler: Açık redüksiyon; Flynn kriterleri; kozmetik sonuç; lateral yaklaşım; medial yaklaşım; pediatrik suprakondiler humerus kırığı.

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