

LETTER TO THE EDITOR

Benefits of Either Operative or Non-Operative Treatment for Perilunate Dislocation and Fracture Dislocations

Dear Editor

We read the article by Bagheri *et al* with great interest (1). We found the study interesting and comprehensive as four groups of patients, including operative and nonoperative in either pure dislocation or fracture dislocation, were compared in terms of Mayo wrist score, Grip strength, range of motion and radiographic parameters. It seems that the results were comparable

to studies by Capo, Chou, Laporte, Malovic, Kremer, Forli and Lutz (Table 1) (2-8).

In the studies listed above, all the patients were treated by operative fixation and none of them reported any experience with non-operative treatment (2-8). Their operative results are almost similar to Bagheri's operative results in which they demonstrated better outcomes in terms of motion and Mayo score than the

Table 1. studies around the world on the results of operative treatment after perilunate dislocation (PLD) and perilunate fracture dislocation (PLFD)

| Authors | Year | Country | Op. vs. Non-op | No. of patients | | Average F/U | Mayo score | PRWE score | DASH score | DJD | Arc of flex-ext | Grip strength | |
|--------------------------|------|---------|----------------|-----------------|----|-------------|------------|------------|------------|-----|-----------------|---------------|--------|
| Bagheri <i>et al</i> (1) | 2013 | Iran | Non-op | PLD | 5 | 70.32 m | 71 | | | | 2 | 98.1° | |
| | | | Non-op | PLFD | 9 | 69 m | 71.1 | | | | 3 | 96.6° | |
| | | | Op. | PLD | 6 | 62.4 m | 85 | | | | 3 | 101.66° | |
| | | | Op. | PLFD | 14 | 65.4 m | 87.7 | | | | 4 | 109.28° | |
| Capo <i>et al</i> (2) | 2012 | NJ, USA | Op. | PLD | 13 | 6 m< | | | 40/100 | 13 | 86° | 59% | |
| | | | Op. | PLFD | 12 | | | | | | 78° | | |
| Chou <i>et al</i> (3) | 2012 | Taiwan | Op. | PLFD | 24 | 45 m | 83 | | | | 144° | 84% | |
| Laporte <i>et al</i> (4) | 2012 | France | Op. | PLD | 6 | 26 m | | 41 | 24.6/55 | | | 101° | 71% |
| | | | Op. | PLFD | 11 | | | | | | | | |
| Malovic <i>et al</i> (5) | 2011 | Croatia | Op. | PLFD | 43 | 29 m | 87 | | | | | | |
| Kremer <i>et al</i> (6) | 2010 | Germany | Op. | PLD | 9 | 66 m | 70 | | | | 20 | 77° | 70% |
| | | | Op. | PLFD | 30 | | | | | | | | |
| Forli <i>et al</i> (7) | 2010 | France | Op. | PLD | 11 | 13 y | 77 | 13 | | | 8 | 94° | 87% |
| | | | Op. | PLFD | 7 | 13 y | 74 | 35 | | | 4 | 98° | 87% |
| Lutz <i>et al</i> (8) | 2009 | Austria | Op. | PLD | 15 | 5 y | 81.5 | 20.7 | | | | | 80-85% |
| | | | Op. | PLFD | 10 | 5 y | 82.7 | 27.7 | | | | | |

F/U=follow-up, PRWE=Patient-Rated Wrist Evaluation, DASH=Disabilities of the Arm Shoulder and Hand

DJD=Degenerative Joint Disease, Non-op=Non-operative, Op=Operative



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non-operative counterpart.

In the current study by Bagheri *et al*, non-operative treatment is also discussed, which has little literature support so far (1). We wonder what the indications were leading the patient and the surgeon electing nonoperative treatment versus operative intervention. Since the outcomes of non-operative care were comparable to the operative outcomes, weighing the benefits of non surgical management may be an area of further investigation. The authors didn't describe the operative intervention in detail making comparisons with other studies difficult. Therefore, we note the

need to compare different operative techniques in the literature to figure out which provide the most optimal outcomes and expedite patients' rehabilitation.

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References

1. Bagheri F, Taraz-Jamshidi M, Birjandinejad A, Shari-fi-Daloei SR, Mirkazmi M, Fathi-Choghadeh M, et al. Trans-scaphoid perilunate fracture-dislocation and isolated dislocations; surgical versus nonsurgical treatment. *Arch Bone Joint Surg*. 2013; 1(2):74-77
2. Capo JT, Corti SJ, Shamian B, Nourbakhsh A, Tan V, Kaushal N, et al. Treatment of dorsal perilunate dislocations and fracture-dislocations using a standardized protocol. *Hand (N Y)*. 2012;7(4):380-7.
3. Chou YC, Hsu YH, Cheng CY, Wu CC. Percutaneous screw and axial Kirschner wire fixation for acute transscaphoid perilunate fracture dislocation. *J Hand Surg Am*. 2012;37(4):715-20.
4. Laporte M, Michot A, Choughri H, Abi-Chahla ML, Pellissier P. Perilunate dislocations and fracture-dislocations of the wrist, a review of 17 cases. *Chir Main*. 2012;31(2):62-70.
5. Malović M, Pavić R, Milosević M. Treatment of transscaphoid perilunate dislocations using a volar approach with scaphoid osteosynthesis and temporary Kirschner wire fixation. *Mil Med*. 2011;176(9):1077-82.
6. Kremer T, Wendt M, Riedel K, Sauerbier M, Germann G, Bickert B. Open reduction for perilunate injuries - clinical outcome and patient satisfaction. *J Hand Surg Am*. 2010;35(10):1599-606.
7. Forli A, Courvoisier A, Wimsey S, Corcella D, Moutet F. Perilunate dislocations and transscaphoid perilunate fracture-dislocations: a retrospective study with minimum ten-year follow-up. *J Hand Surg Am*. 2010;35(1):62-8.
8. Lutz M, Arora R, Kammerlander C, Gabl M, Pechlaner S. Stabilization of perilunate and transscaphoid perilunate fracture-dislocations via a combined palmar and dorsal approach. *Oper Orthop Traumatol*. 2009;21(4-5):442-58.