

Kienböck

=Abstract=

Surgical treatment of the Kienböck's disease

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The natural progression of lunate osteonecrosis is one of loss of vascularity, fragmentation, and later collapse with subsequent loss of carpal integrity. In the treatment of the Kienböck's disease, reported that surgical treatment has been more effective than the conservative treatment, such as cast immobilization which cannot prevent the progress of the disease even if its initial stage. The ultimate goal of treatment is mechanical decompression and revascularization of the lunate. Many therapeutic guidelines were researched by several authors to the different stages, but not established absolute guideline yet. We have treated a total of 13 cases of Kienböck's disease, their symptom duration was 40 months in average. All cases were followed for 39months in average. According to the Lichtman's classification, stage II in 3 cases, stage IIIa in 6 cases, stage IIIb in 4 cases were defined radiologically. The ulnar variance were negative in 8 cases, neutral in 4 cases, positive in a case. Operative treatments were performed with scaphoido-capitate fusion in 2 cases, triscaphe fusion in 8 cases, radial shortening in 3 cases, from Mar. 1991 to Dec. 1998. Their end results were analyzed with subjective pain, objective wrist motions clinically which based on Lichtman's criteria and with carpal height radiologically. Ten cases were satisfied and another 3 cases were unsatisfied according to the Lichtman's criteria. The pain was relieved in all cases but the range of motion was decreased moderately after scaphoidocapitate fusion. The carpal index was not changed from 0.50 preoperatively

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to 0.50 postoperatively in average in all cases. There were were a superficial wound infection and a paresthesia of the operative sites as postoperative complications.

Key Words : Kienböck's disease, Operative treatment

3 , 4 .
 가 가 7 , 2 , 1 ,
 가 Peste¹³⁾ 3 가
 Kienböck⁹⁾ 가 2 ,
 가 11
 / 36°/42°
 가 8 , 5
 가 1 , 6 2
 가 , 2 8 3 4
 Lichtman¹⁰⁾ Stale 가 1 1 , 1 3 8 , 3
 4가 4 3 3 .
 8 , 3 ,
 가 2 , Lichtman
 가 가 stage II가 2 , stage IIIa가 6 , stage IIIb가 5
 가 . Carpal index 0.50 .
 Hulten⁶⁾ stage II 2 .
 가 Joint leveling procedure(stage IIIa 1 , 5
)가 (2
 2, 4, 11) , 1
) . stage IIIb 3
 , 2 -
 Kienböck (1
) . 8 2
 - 2 .
 Lichtman⁸⁾
 1991 3 1998 12 Kienböck 75%
 13 , / 가
 20 가 3 , 30 가 6 10° ,
 , 40 4 . 5:8 ,
 가 9
 가 4 .
 6 가

Lichtman

10 ,

3 .

/

가 , 4 10° 7 10° 1. 1

10° . 3 39 5

2 Stage IIIb - 3

/

가 10° , 1 가 1

stage IIIa 1 .

가 . stage IIIb (Fig.1A).

Carpal index 가

0.50/0.50(/)

가 .

A

B

C

Fig. 1. A. Preop film is showing the marked sclerotic & collapsed osteonecrotic change in lunate with stage IIIb. B. Scaphoidocapitate fusion, combined tendon ball replacement arthroplasty after excision of lunate was performed. C. 3-year postop film shows the good fusion state but radiocarpal arthritis with joint space narrowing.

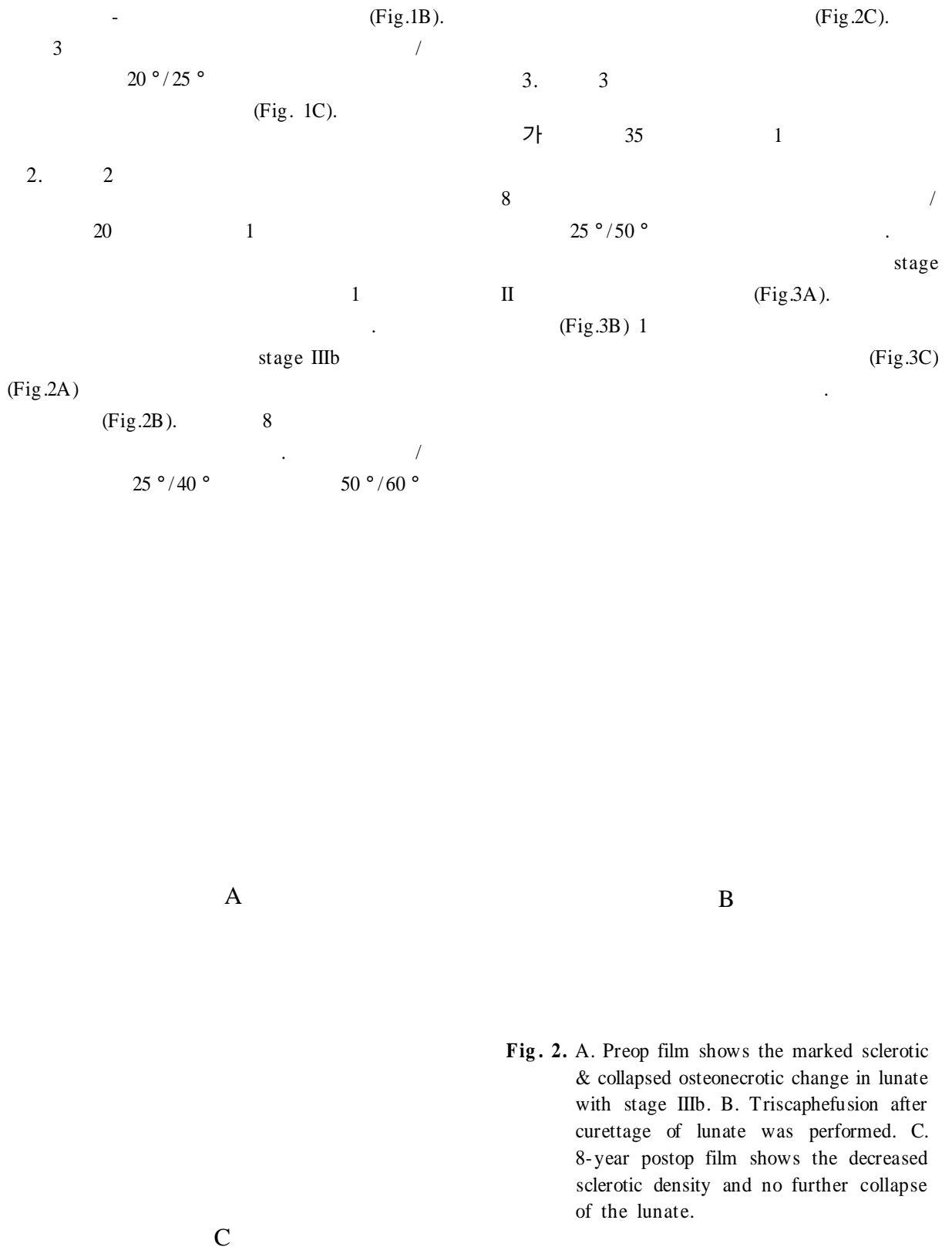


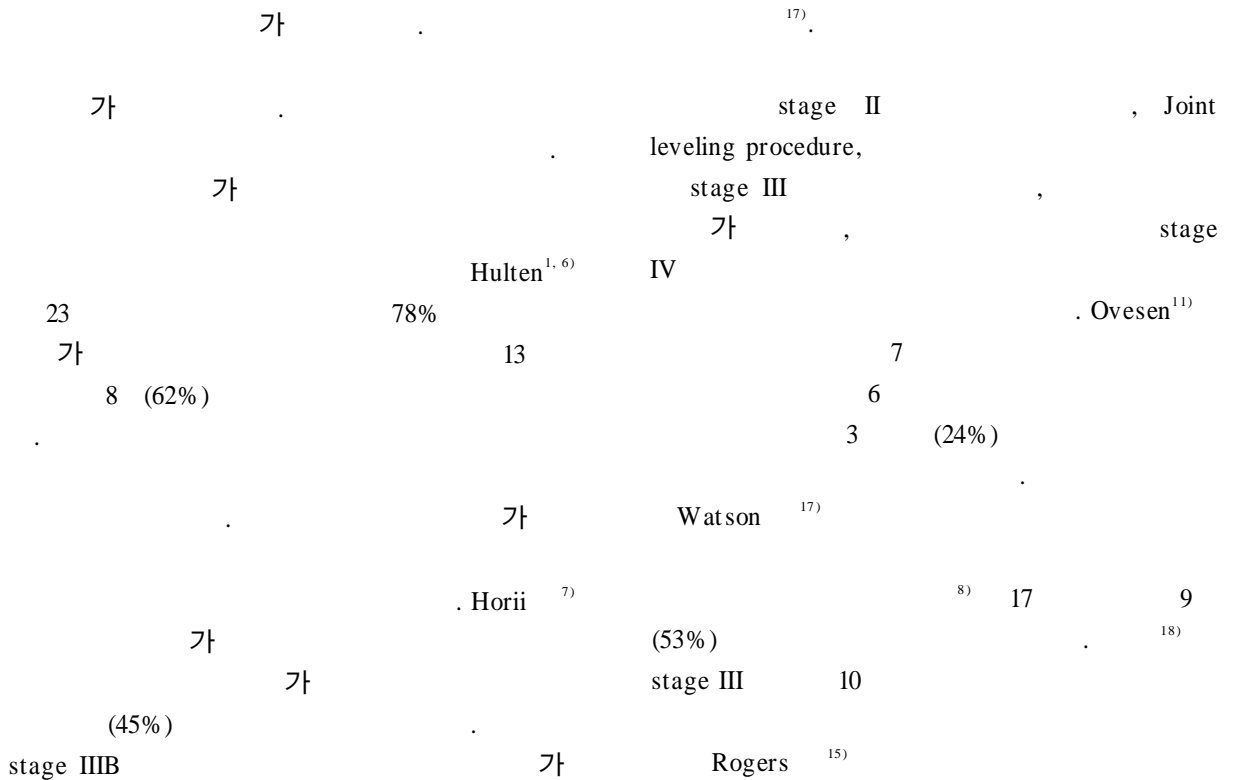
Fig. 2. A. Preop film shows the marked sclerotic & collapsed osteonecrotic change in lunate with stage IIIb. B. Triscaphefusion after curettage of lunate was performed. C. 8-year postop film shows the decreased sclerotic density and no further collapse of the lunate.

A

B

C

Fig. 3. A. Preop MRI is showing the sclerotic but normal shape of the lunate with stage II. B. In immediate postop film, radial shortening was performed. C. 3-year postop film shows the good fusion state of the radius and decreased sclerotic density of the lunate compared to the preop film.



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