

AO

.

< >
 : AO
 : 1998 4 2001 8 AO
 18
 가 34 (17~53),
 19 (7~32) 가 11 가
 1/3 1/3 1/3 AO
 12A37가 11 , 12B2가 2 , 12B3가 1 , 12A2가 4
 가
 : 12.2 (9~16) , 2
 , 1 13
 4 12
 : AO

:
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* 2001

18

가

가 10 , 8 17 53

가 34 7

32 19

(retrograde) (antegrade)

2.

가11 가 ,

1/3 1/3 1/3

AO 12A3가11 ,

12B2가2 , 12B3가1

3.

1.

1998 4 2001 8

90 가

(drill bit) 30

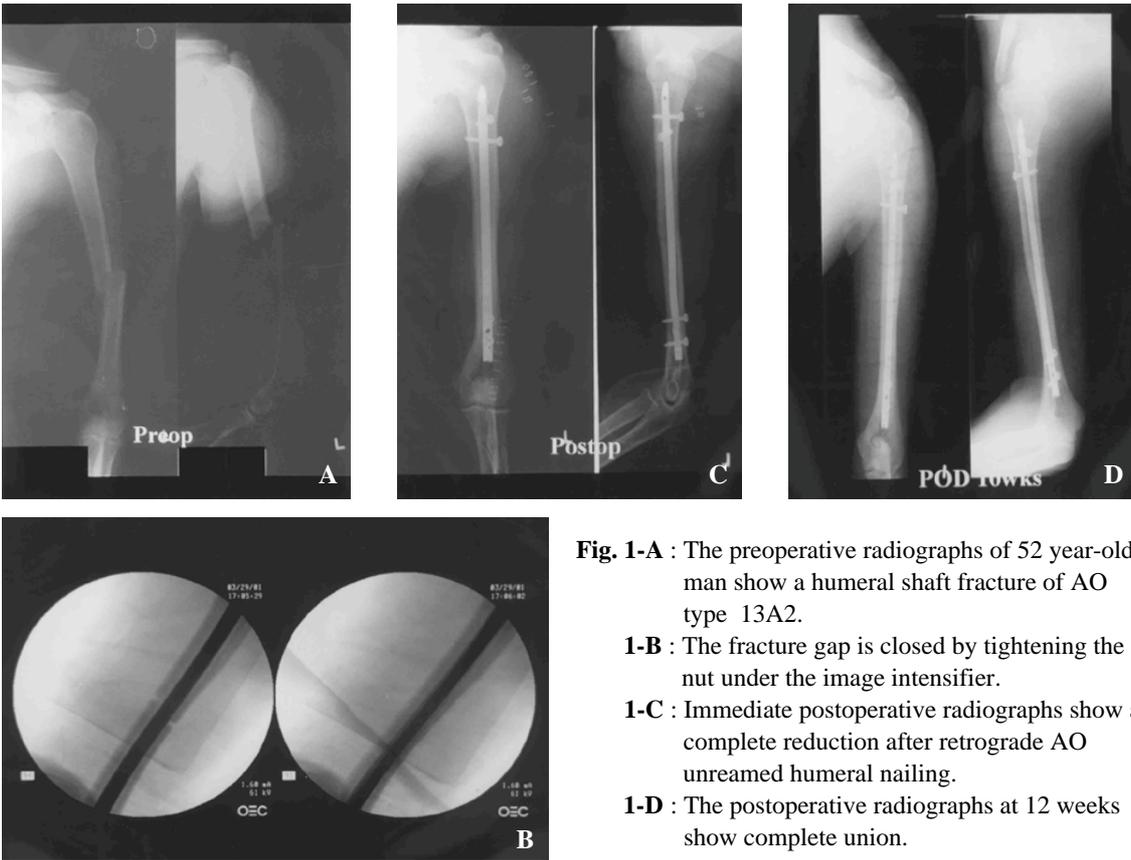


Fig. 1-A : The preoperative radiographs of 52 year-old man show a humeral shaft fracture of AO type 13A2.

1-B : The fracture gap is closed by tightening the nut under the image intensifier.

1-C : Immediate postoperative radiographs show a complete reduction after retrograde AO unreamed humeral nailing.

1-D : The postoperative radiographs at 12 weeks show complete union.

(cornical burr)

5,14)

가

(near cortex)

17).

가

(antegrade)

(retergrade)

(compression device)

(Fig. 1A, Fig. 1B, Fig. 1C, Fig.

1D)

가 . Ikpeme⁹⁾

가 12%

12.2 (:9-16)

가

, 1 (5.5%)

13

가

가4

12

.2

100%

.4

4

가

2

가

2

가

,U

가 AO

A2, A3, B2, B3

A3

, 4,7,9,10,12)

11

가

. Chales³⁾

Lee¹¹⁾

2,13)

가

⁶⁾. AO

가 ,

2



Fig. 2A : The preoperative radiographs of 50 year-old man show a humeral shaft fracture of AO type 13B2.

Fig. 2B : Immediate postoperative radiographs show a good reduction after retrograde AO unreamed humeral nailing, but show a iatrogenic fracture at the near cortex of the nail insertion site(arrow).

Fig. 2C : Anterior-posterior and lateral radiographs at 13 months show non-union.

Fig. 2D : Fracture was united at 12 weeks after bone graft and internal fixation.

(near cortex)

(far cortex)

가 . 1
(Fig 2).

가

가

AO

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Abstract

THE TREATMENT OF HUMERAL SHAFT FRACTURE WITH RETROGRADE AO UNREAMED HUMERAL NAIL

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Purpose :To evaluate the results of the treatment of humeral shaft fractures using retrograde AO Unreamed Humeral Nail(UHN).

Materials and Method:From Apr. 1998 and Aug. 2001, 18 humeral shaft fractures were treated with retrograde AO UHN. All fractures were classified according to the AO classification. The results were analyzed by bony union time, range of motion and complication.

Results:There were eleven cases of A3, two B2, one B3, four A2 humeral middle shaft fractures according to the AO classification. The mean bony union time was 12.2 weeks(range;9-16 weeks). All patients regained full range of motion of the shoulder joint and the elbow joint but 2 patients with intraoperatively ruptured capsule had transient elbow motion limitation. Complications were iatrogenic fractures at the entry portal in 2 patients(15%), transient shoulder pain in 4 patients(30.7%), nonunion in 1 patient(7.6%), required bone graft and internal fixation after removal of the nail at 13 months postoperatively.

Conclusion :The treatment of humeral shaft fracture with retrograde AO unreamed humeral nail is one of the good options to reduce the rate of non-union or delayed union by compression effect if the intraoperative errors is prevented.

Key words:Humerus shaft, Fracture, Unreamed humeral nail

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