
:
 K- Halo-mill
 : 1990 3 1998 1
 20 가 14 , 가 6 7 42
 20.8 . 1 5 6 3 2
 . 9 가 , 6 , 2 , 1 , 1
 가 2 . 9 5 , 가 2 ,
 4 . 6 1
 , ,
 Halo-mill
 1
 :
 가 가 15 10
 . 14
 가 가 10 4
 1 가 . 6 , 11 ,
 Halo-mill 2 , 1 .
 Halo-mill 2 7mm Halo-mill .
 .
 1
 :
 가 Halo-mill 가 Halo-mill
 가
 : ,
 :

(Fig. 1)

Halo-

mill

1935 Jaffé²⁾

6 , 11 ,

Halo-mill

2

. 10 30

1

가

Halo-mill

가

(nidus)

Hall-mill

7mm

가

Halo-mill

가

K-

Halo-mill

(Fig. 2).

1 25

Halo-mill

K-

1990 3

1998 1

20

가 14 ,

가 6

2.3:1

7

42

20.8

10

30 가

80%

1

5

6

3

2

9

가

20

10

1

6 ,

가 2 ,

1 ,

9

16

1

가가

가 2

가 5 ,

가 2 ,

10

1

1

6

5 ~ 12mm

1 , 5

1

2

12

(halo)

1 18

12

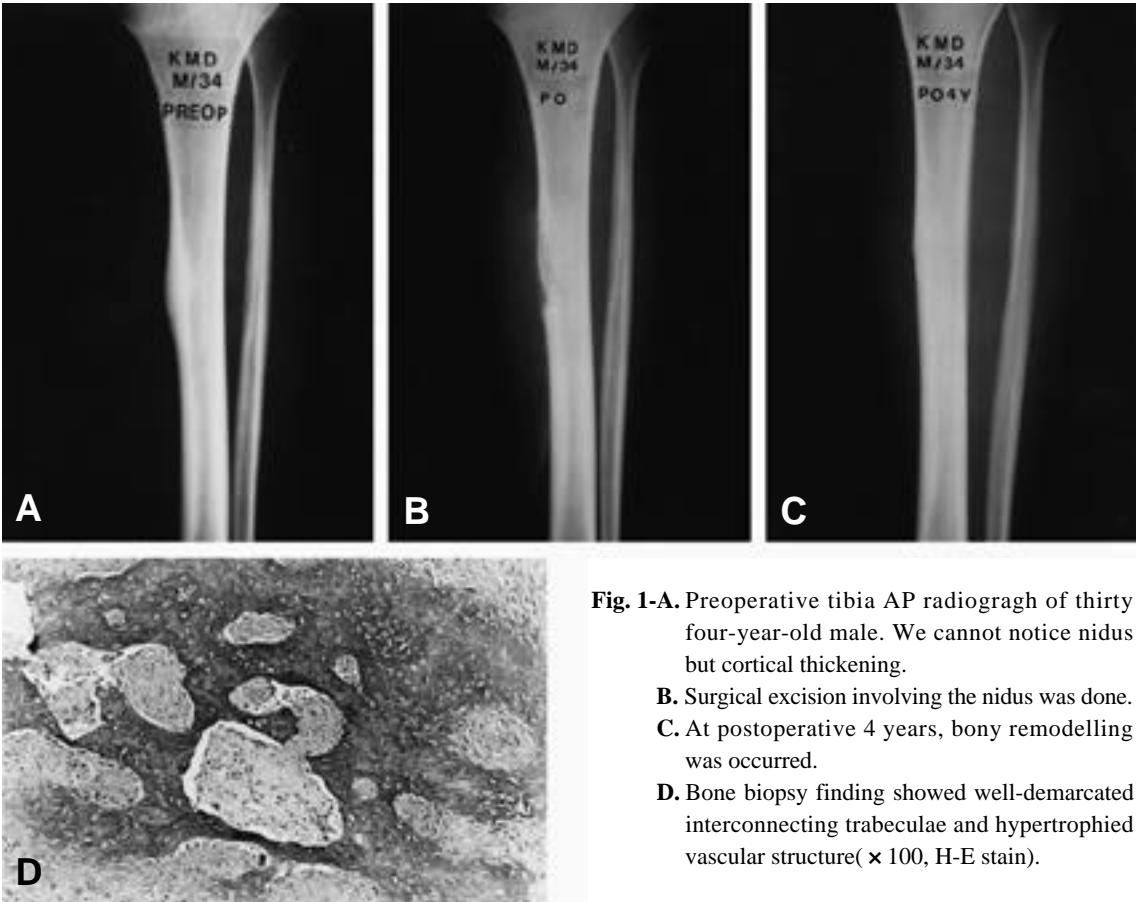


Fig. 1-A. Preoperative tibia AP radiograph of thirty four-year-old male. We cannot notice nidus but cortical thickening.
B. Surgical excision involving the nidus was done.
C. At postoperative 4 years, bony remodelling was occurred.
D. Bone biopsy finding showed well-demarcated interconnecting trabeculae and hypertrophied vascular structure(× 100, H-E stain).

4 2 tosis) 1
 T1 T2 .
 2 T1 .
 , T2 .
 가 .
 가 1930 Bergstrand
 가 1935 Jaffe²⁾
 12% 3 1
 50% 10 ~ 20
 (loose connective tissue) .
 가 .
 가 ⁵⁾
 (hyperos , ,

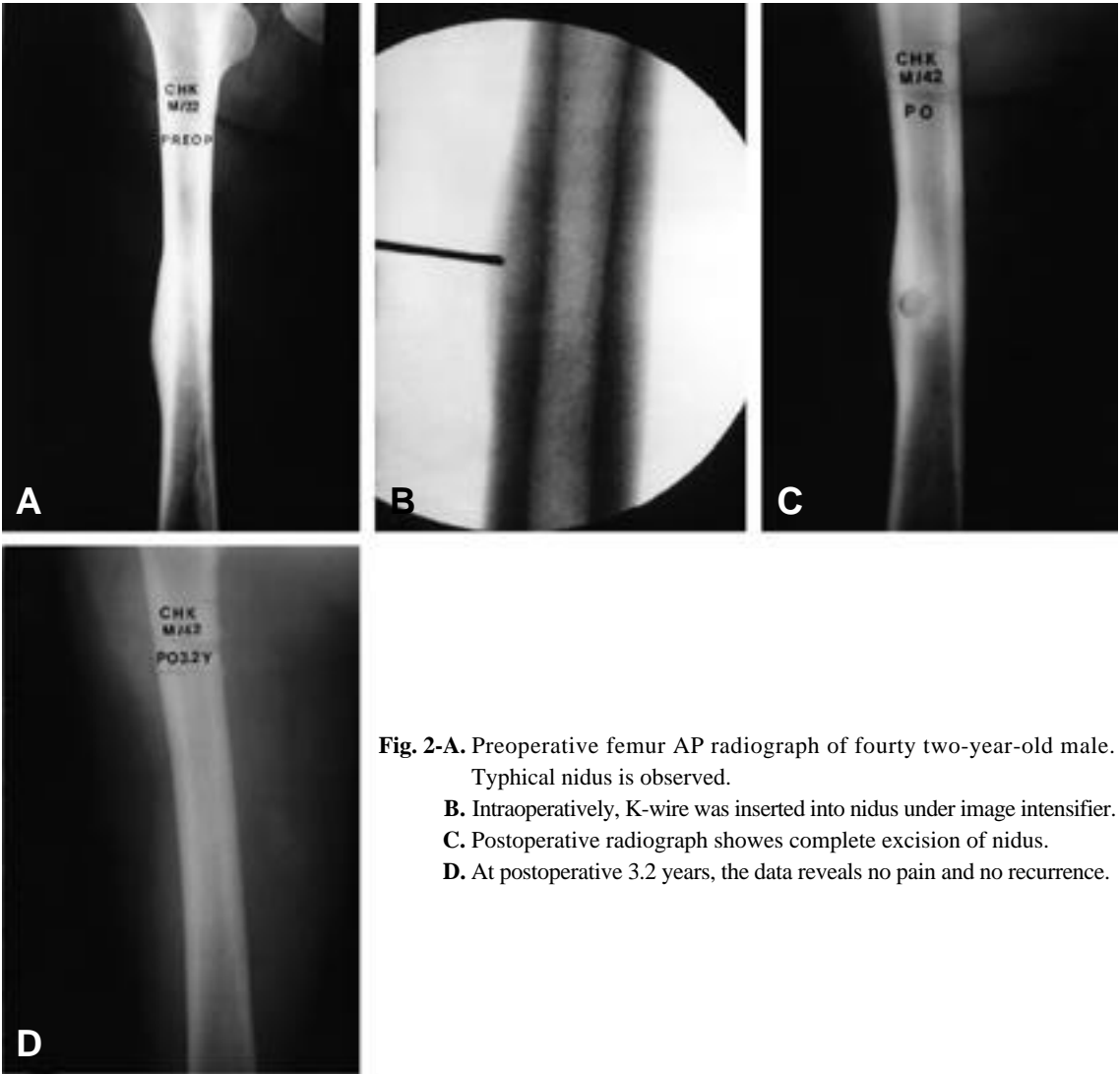


Fig. 2-A. Preoperative femur AP radiograph of forty two-year-old male. Typical nidus is observed.
B. Intraoperatively, K-wire was inserted into nidus under image intensifier.
C. Postoperative radiograph shows complete excision of nidus.
D. At postoperative 3.2 years, the data reveals no pain and no recurrence.

2/3가

20 7

7)

1

27)

20,27)

가

16)

11,28)

1

3

가
가

63%

29)

T2

10)

가

20,23)

2

4),

가

2)

Saifuddin

20)

8,19)

12

6

(convex side)

5 가

가

Ewing

10)

Brodie

26)

가

20 10

Kattapuram¹⁴⁾

10,12)

가

가

Nor

man²⁴⁾

가

가

가,

가

Roenthal²⁵⁾

87

, 38

6~12

가

15

16

가 가

21)

가

McGrath²²⁾

2

Table 1. Patients data

	Age	Sex	Location	Aspirin effect	Treatment method	F/U period
1	34	M	Tibia, D	-	Curettage	4Y
2	7	M	Tibia, D	-	Excision	1Y 5M
3	18	M	Spine, T12		Hemilaminectomy	1Y 5M
4	26	M	Femur, PM	+	Curettage	2Y 11M
5	42	M	Femur, D		Hallo-mill excision	1Y
6	10	M	Femur, PM	+	Excision	1Y 2M
7	25	M	Ulnar, PM		TER	1Y 6M
8	17	M	Femur, PM	+	Excision	2Y 7M
9	12	F	Femur, PM	-	Curettage	1Y 7M
10	22	M	Femur, D	+	Hall-mill excision	3Y 1M
11	16	M	Tibia, D	-	Excision	1Y
12	12	F	Femur, PM	+	Excision	3Y 11M
13	29	M	Tibia, DM	-	Excision	1Y 7M
14	20	M	Spine, L4		Hemilaminectomy	1Y 1M
15	17	F	Tibia, PM	-	Curettage	1Y 7M
16	8	M	Tibia, D		Excision	1Y 4M
17	12	F	Femur, neck		Excision	4Y 1M
18	32	M	Femur, neck		Excision & multiple pinning	1Y 7M
19	35	F	Maxilla		Curettage	1Y 1M
20	37	F	Skull		Curettage	2Y

* M : male, F : female, D : diaphysis, PM : proximal metaphysis, DM : distal metaphysis, + : effective, - : ineffective, TER : total elbow arthroplasty, F/U : follow up period

가 , Hall-mill 가

Wood light , 가

가 . Doyle ⁶⁾ .

Craig . Kneisl ¹⁷⁾ 가 , Halo-mill

, 9 6 33 , 가

가 가

가 , Halo-mill

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Treatment of Osteoid Osteoma

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Purpose : The purpose of the current study was to report the results of curettage and en bloc excision as well as to introduce how to excise the nidus percutaneously with Halo-mill.

Material and Methods : Twenty patients(14 men and 6 women) were evaluated, who had operative treatments after diagnosed as osteoid osteoma from March 1990 to January 1998. These patients ranged in age from 7 to 42 years(average: 20.8 years). Locations were 9 femurs, 6 tibias, 2 vertebrae, 1 ulna, 1 maxilla and 1 skull. Nine femoral lesions included 5 proximal metaphysis, 2 neck and 2 diaphysis ,while 5 tibial lesions included 3 diaphysis, 1 proximal metaphysis and 1 distal metaphysis. We used simple radiography, bone scan, CT and MRI for the accurate diagnosis and localization. As for surgical treatments, while excision and curettage had to need open-exposure of lesion, the percutaneous excision of nidus did not need open-exposure : guided Halo-mill into K-wire inserted to nidus under image intensifier.

Results : Simple radiography showed that 10 cases had typical nidus and others had only cortical sclerosis. Bone scan was performed at 14 cases and all had hot uptake except one case. We used CT in 10 cases and MRI in 4 cases as diagnostic methods, of which 1 case didn't reveal nidus at CT. Surgical treatment consisted of 6 curettages, 11 excisions, 2 percutaneous excisions with halo-mill and 1 total elbow arthroplasty. We used 7mm sized Halo-mill. During the follow-up period, all patient relieved symptoms and there were no recurrences. All had histologically typical findings except one which had hyperostosis without nidus.

Conclusion : Complete removal of the nidus is the most important factor in the treatment. We could excise the nidus percutaneously in 2 cases with the minimal injury to surrounding soft tissues. If we could evaluate the precise location, size of nidus and percutaneous accessibility, the percutaneous excision of nidus with Halo-mill could be an alternative method as a treatment of osteoid osteoma.

Key Words : Osteoid osteoma, Percutaneous excision of nidus

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