

()

가

: ()

가

: 1995 2002 8 가
21 (3) X-
16 (3~46)

: 21 14 (66.7%)가 40 16 (76.2%)
47 (19~68) 18 가 4
, (3), (2) (1) , 4 .
가 9 (50%), 가 4 , 가 2 .
(7) (11) (3),
14 (3~48) 3 1
, 2 20
22 12 ,
4 . X- 가
, 3
, 16
, 18 3 (16.7%) .
X-

가

: () 가

, 가

: , , , , , ,

가 2 , 12 , 22

3

가

14 (3~48) ,

(ganglion)

7,10,15)

(7) ,

가

16 (3~46)

(localized nodular tenosynovitis)

(localized

pigmented villonodular synovitis)

(sclerosing

hemangioma),

(fibrous

21 14 (66.7%)가 , 40

xanthoma),

(16/21, 76.2%), 47

(benign synovioma)

(19~68)

5,7,10,13,15)

18

가 4 , (3) , (2)

가,

(10) 4

가

2,6,8,919)

가 9 (50%), 가 3 ,

1968 Einstein⁵⁾

가 2 , (7)

가 (11)(3)

(rubbery

hard)

, 2

(2/18,11%)

가

2 (12 22)

가

1995 2002 가

3

21

가

18

2 (20, 27) 2.0 cm
 2,3,4
 가 12 22
 , 가
 3 6 Simvastatin (subcutis)
 가 2
 7 17
 가
 가 (collagenized stroma),
 (polyhedral histiocyte)
 (foamy cell)가
 16 3
 가 1, 2, 4
 (2)
 가 (1)

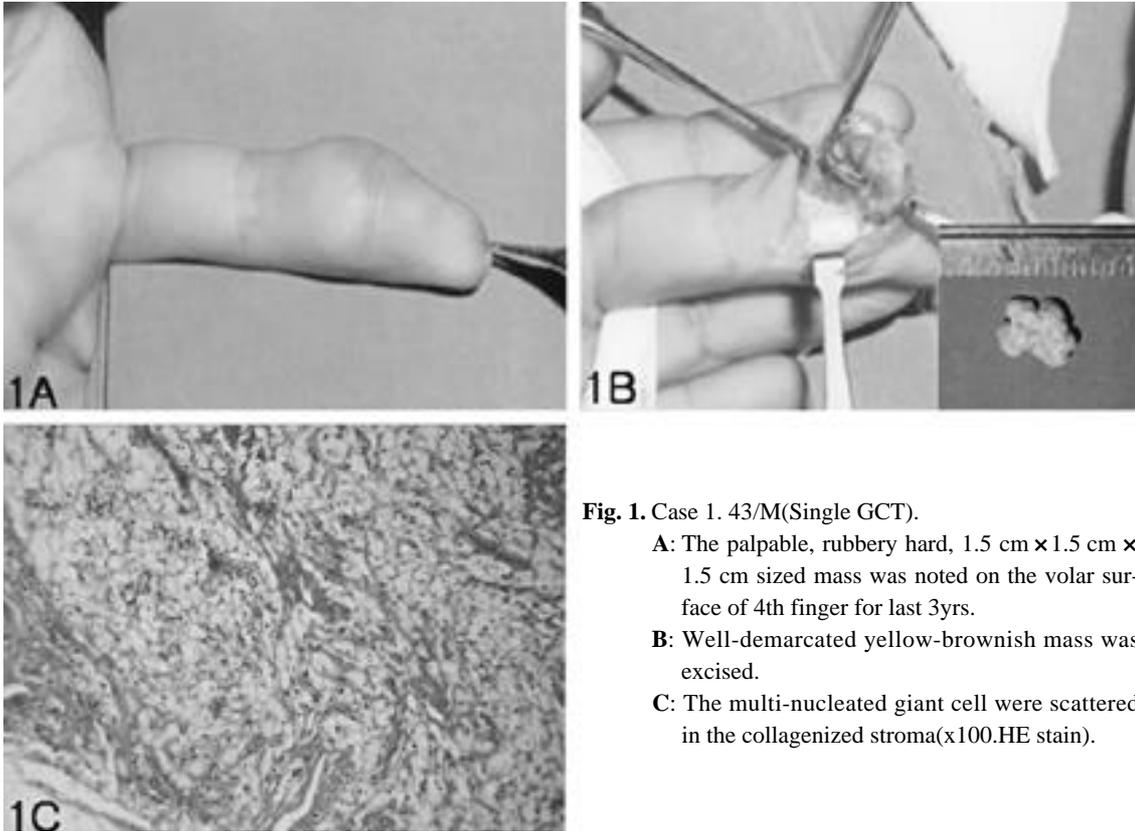


Fig. 1. Case 1. 43/M(Single GCT).
A: The palpable, rubbery hard, 1.5 cm × 1.5 cm × 1.5 cm sized mass was noted on the volar surface of 4th finger for last 3yrs.
B: Well-demarcated yellow-brownish mass was excised.
C: The multi-nucleated giant cell were scattered in the collagenized stroma(x100.HE stain).

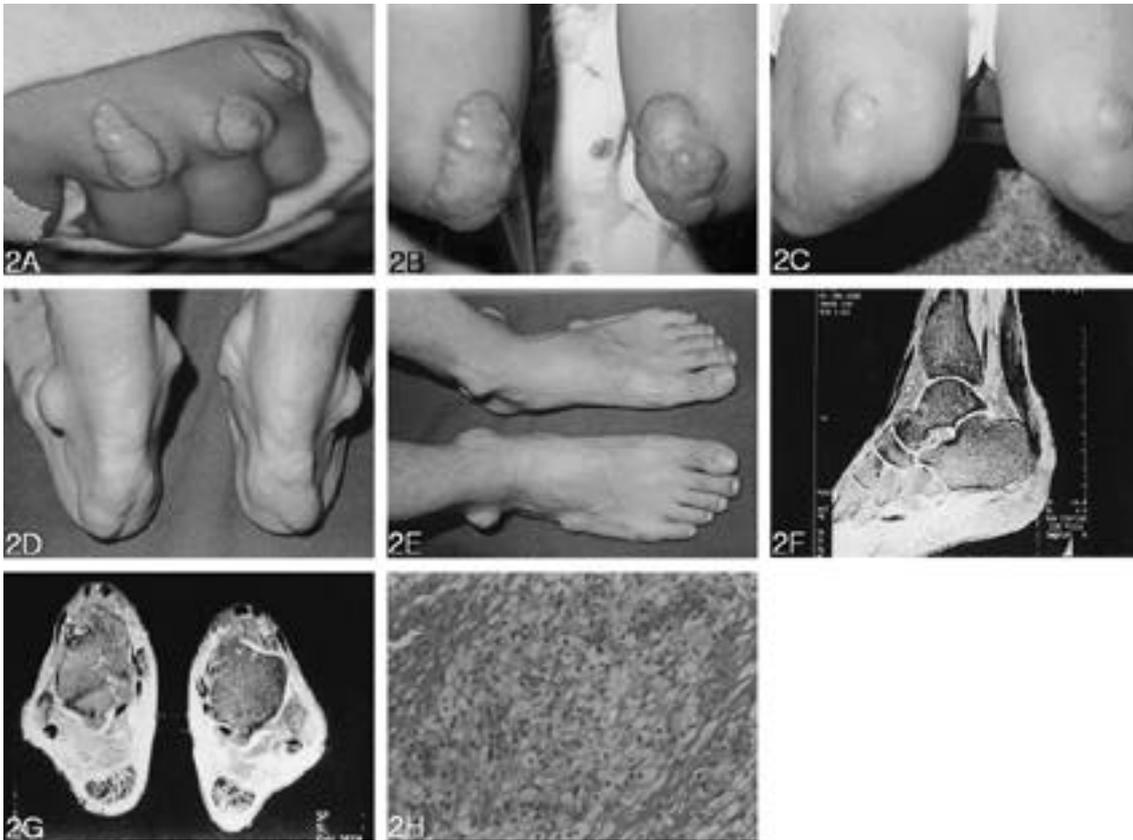


Fig. 2. Case 2. 26/M(Multifocal GCT).

A-E : Pre-operative and intraoperative photographs showed multiple various sized palpable masses on the extensor tendon sheath of hand(Fig. 2A), triceps tendon on both elbow(Fig. 2B), subcutaneous xanthoma on the prepatellae knee, both(Fig. 2C) and both malleoli, Achilles tendon & peroneal tendon sheath of both ankles(Fig. 2D&2E).

F-G : Sagittal T1-weighted MRI showed a homogenously enlarged Achilles tendon with increased signal intensity caused by xanthomatous material and parallel striation of low signal intensity caused by the collagen fibers of the tendon(Fig. 2F). Axial T1-weighted MRI revealed the characteristic diffuse, stippled pattern of a xanthoma of the Achilles` tendon(Fig. 2G).

H : A biopsy specimen showed foamy xanthoma cells, multinucleated giant cells and cholesterol crystals, dispersed between the collagen fibers of the Achilles tendon(x200.HE stain).

(polyhedral histiocyte)
(Fig. 1C).

2

1. 43/M. (Fig. 1A-1C)

3

3

2. 26/M.(Fig. 2A-2H)

1.5x1.5x1.5 cm

(Fig. 1A)

(Fig. 1B),

26

8

Table 1. Differences between solitary xanthoma of tendon or its sheath, and multiple xanthomatosis of tendon with hypercholesterolemia

	solitary xanthoma	multiple xanthomatosis
Ages	middle aged	younger
Number of lesion	site single or a few	multifocal
Frequently involved site at hand	palmar side of finger	extensor surface of metacarpopogalangeal joint
Symmetrical involvement	not always	almost always
Involving tissue	tendon and its sheath	tendon and its sheath, subcutis
Skin changes	normal skin color with palpable nodules	scattered pattern of yellowish discoloration of skin with nodules
Associated disease	none	hypercholesterolemia with premature coronary atherosclerosis
Heredity	none	autosomal dominant
Pathologic	changes multi-nucleated giant cell with collagenized stroma	multi-nucleated giant cell with foamy cells, cholesterol crystals
Pathogenesis	villonodular synovitis	storage disease

,
 . 6 (foamy cell)가
 (Fig. 2H).
 , 가
 Simvastatin , 1
 2,3,4, , 451 mg/dl, 51 mg/dl, 416
 , 22 mg/dl
 1~5 cm
 (Fig. 2A-2E).
 (Fig. 2F-2G),
 469 mg/dl, 11 mg/dl,
 408 mg/dl 가
 Simvastatin
 , 17 Chassaignac³¹
 , Jaffe
 (Fig. 2A) (Fig. (local
 2F-2G) ized pigmented villonodular synovitis)
 (Fig.2B) (Fig. 2C) (Fig.
 2D,2E)

, Moore ¹⁵⁾

(localized nodular tenosynovitis)

가

(xanthoma)

2 3

(hemosiderin)

¹⁾

T1, T2

, Jones ¹²⁾

(Table 1).

5

2

(2).

¹⁸⁾

Jaffe ¹⁰⁾ 10 30

7 ~ 45%

^{12, 15, 16)}

, Keith ¹³⁾ 30 50 가

가 ^{4, 18)}

47 40

3 (3/18, 16.7%)

가 16 (16/21, 76.2%),
66.7%)

가 14 (14/21,

McMaster

4

1 가 1

^{12, 13, 15)}

Keith ¹⁵⁾

2/3

가

가

(atherosclerosis)

Yamamoto ¹⁹⁾

(Table 1).

500 1

(pressure atrophy)
sion)

(pressure ero-
sion)
(cortical

400 mg/dl
30 ~ 40

perforation)

(intraosseous expansion)

Ignacio ⁹⁾

23.3%

, 11.3%

50

80%

가

가

가

가

가

, Ray ¹⁸⁾

26%

30 ~ 40

4 (19%)

가

가
 ,
 ,
 가 가
 가 1
 2,6,19)
 , ,
 40 ,
 가
 . 2 cm
 가 .
 Fahey ⁶⁾ 가 4:3 , 가
 22
 30% 10 , 가
 90% 가 .
 가
 , , ,
 가
 Table1 , 가 .
 2 8 , 가
 20

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15 173
 2,6). Klemm ¹⁴⁾ 62%
 가
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 가

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Giant Cell Tumor of Tendon Sheath in Hand (Comparative Studies Between Single and Multifocal Lesions)

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Purpose: To analyse their end results and also to differentiate the single or multiple giant cell tumor(GCT) of tendon sheath in hand.

Materials & Methods: Total 21 cases with GCT of tendon sheath in hand were treated surgically and analyzed their end results with clinically, radiologically and pathologically to allowed for average 16 months after surgical excision.

Results: The finger flexor tendons, especially on index and ring finger, involving distal interphalangeal joint and mid-phalanges in fourth decades (average age of 47 years old) were frequently involved, and the mass was not exceed than 2 cm in size, fixed on tendon sheath with rubbery hard tenderness but rare bony involvements except 4 cases of bony erosion and cortical perforation. The three cases with multiple GCT of hand was also combined with familial hypercholesterolemia, and are commonly involved the extensor tendons as well as achilles tendons bilaterally, treated with partial excision because of multiplicity. Average 16 months after surgical excision for single GCT cases was followed and showed the recurrence in 3 cases(3/18,16.7%), treated with wide excision. The single and multifocal GCT are similar in pathologic changes but different soft tissue tumors in their pathogenesis, treatment and prognosis.

Conclusion: Incomplete excision of GCT of tendon sheath in hand are thought to be the cause of recurrence, especially in cases with incomplete lesional excision, in multilobular and bony involvement etc. So careful wide excision is necessary to prevent the recurrence.

Key Words: Hand, Giant cell tumor, Tendon sheath, Hypercholesterolemia

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