

琉球大学学術リポジトリ

[原著]沖縄における弾性線維腫の分布と症例一覧

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沖縄における弾性線維腫の分布と症例一覽

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はじめに

弾性線維腫は稀な軟部組織腫瘍であり、自験例を除くと海外例を含めわずかに81例^{8)~53)}の報告例があるにすぎない。

著者はすでに沖縄県内の弾性線維腫を報告したが、^{1)~7)}その後症例が増加し、1968年11月までに141例の多数例を検討することができた。これは海外例を含めた全報告例222例^{1)~53)}の63%をしめ驚異的な症例数である。

今回はこれまでに検索された弾性線維腫141例の一覧表を作製した。これらの症例一例一例はすべて貴重な症例であり、これらの症例が今後の弾性線維腫の研究のため重要な役割を演ずるものと考えている。

1. 沖縄県内の弾性線維腫の臨床所見の概略

以下にのべる所見は症例一覧表(Table 1)の主要項目の概略を記載したものである。

1) 年齢および性別

手術時(手術を施行していない例は初診時)の年齢は35才(世界最低年齢)から98才(世界最高年齢)までで平均71才で、女性132例、男性9例である。

2) 出身地および職業歴

出身地(原則として出生地、本籍地、女性は結婚前の本籍地)は全例沖縄県であり、居住地は沖縄県で出生した後に兵庫県に移住した1例を除いて全例沖縄県内である。出身地の詳細は別に記載する。

職業は141名中137名が農業などの肉体労働の経験者であるが、他に家婦2名、元看護婦1名、元公務員(郵便局長)1名のごとく特別過激な労働に従事したことのない人達も含まれている。

3) 家系内発生例

141名中53名(37.6%)が家系内発生例であり、渡名喜島出身者では43名中29名(67.4%)に家系内

発生が認められた。(Fig 1)はそのうちの代表的な一家系を示してある。

4) 腫瘍発生部位

腫瘍の発生部位は肩甲下部のみの発生例が116例で最も多く(Fig 2)、その他肩甲下部、肘下部腫瘍併発例21例(Fig 3)、右側肩甲下部、両側側胸部(各々2か所)、両側肘下部計7か所発生例1例(Fig 4)、両側肩甲下部、左肘下部、右坐骨結節部計4か所発生例1例、両側肩甲下部、右坐骨結節部併発例1例、両側肘下部のみの発生例1例であった。

5) 持続期間

腫瘍発見当日生検を実施したものから発見後67年経過したものまで種々である。

腫瘍の発見時年齢は現在まで考えられていたような高年齢とは限らず、141例中、17才発見1例、18才1例、20才1例、25才1例のほか、30才代6例、40才代9例など以外に若い年齢で腫瘍発生に気づいていた。これらは腫瘍の発生要因を考える上でも注目されなければならないものと思われる。

2. 沖縄県内の弾性線維腫の分布

現在までに発見された弾性線維腫の県内分布は次のようである。

1) 出身市町村

渡名喜村43例、粟国村39例、那覇市13例、糸満市8例、渡嘉敷村7例、座間味村、東風平村各々6例、本部町3例、伊平屋村、佐敷村各々2例、大里村、東村、今帰仁村、与那原町、浦添市、久米島仲里村、伊是名村、豊見城村、勝連村、沖縄市、知念村久高島、石垣市各1例である。

2) 弾性線維腫に対する集団検診

沖縄県内離島の弾性線維腫発生頻度を調査するため、粟国島、渡名喜島、渡嘉敷島、阿嘉島、慶留間島、本部水納島、南大東島、宮古大神島、米間島、石垣島於茂登地区、川平地区、与那国島で集団検診

を実施した。これらの検診結果は (Table 2) の通りであるが、渡名喜島、粟国島、渡嘉敷島で多数の弾性線維腫患者が発見されたが、宮古、八重山地方では弾性線維腫症例は発見されなかった。1978年8月に沖縄県によって実施された宮古多良間島の無医地区診療 (受診者427名) でも弾性線維腫症例は発見されなかったという。

これらの検診結果が新聞報道された (1978年7月3日, 沖縄タイムス朝刊, 1978年7月5日, 琉球新報夕刊) 後, 八重山石垣市出身の一女性 (症例133) が琉球大学附属病院外科を受診, 生検で弾性線維腫の診断をえたが患者は数世代前に沖縄本島から石垣島に移住した開拓民の子孫であった。

Table 3は渡名喜島検診の際の性別, 年齢別弾性線維腫発生頻度である。

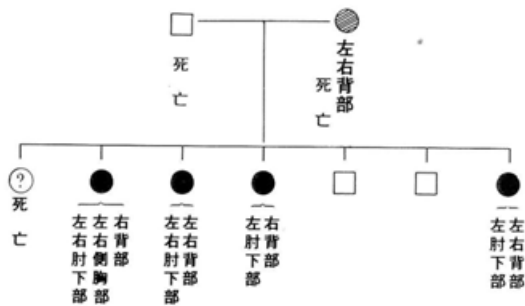


Fig. 1. A family tree of elastofibroma in Tonaki isl. (Case 27, 28, 29, 30)



Fig. 2. Subscapular elastofibroma. (Case 79)

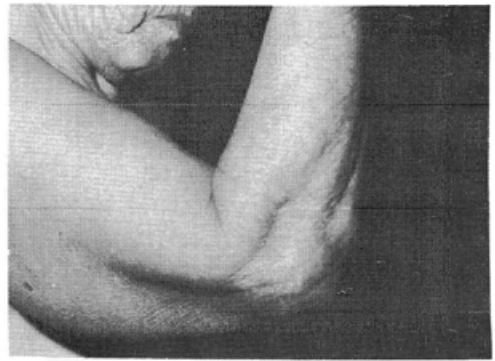


Fig. 3. Elastofibroma of infraolecranon. (Case 30)

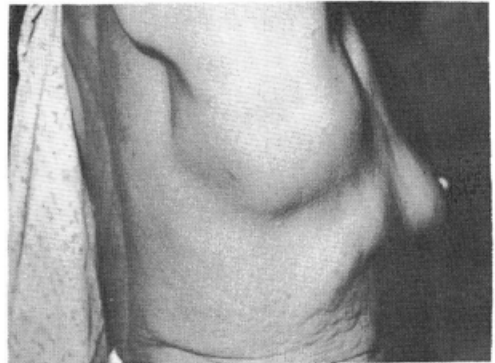


Fig. 4. Elastofibroma of back and thorax. (Case 28) She has 7 lesions of elastofibroma.

考 察

弾性線維腫 (Elastofibroma) は稀な軟部組織腫瘍であり, Järvi & Sax'en (1959)²⁰⁾ の報告以来自験例を除くとわずかに81例^{8)~50)} の報告がみられるにすぎない。これらのうち沖縄県を除く本邦症例出身地は鹿児島23例 (13例は奄美諸島), 岡山4例, 宮崎3例, 東京, 神奈川, 埼玉, 兵庫, 島根, 徳島, 佐賀各1例であり, 鹿児島, 奄美諸島に多く発見されている。また沖縄県出身の症例は自験例以外に3例^{20, 21, 30)} 報告されている。

今回著者が実施した検診では, 沖縄本島および周辺の島々にきわめて多数の弾性線維腫患者が発見された。宮古, 八重山地方の集団検診では弾性線維腫患者は発見されなかった。集団検診結果の新聞報道後八重山石垣市出身の一女性が琉球大学附属病院外科を受診, 生検で弾性線維腫の確定診断をえたが,

先にのべたように患者は数世代前に沖縄本島から石垣市に移住した開拓民の子孫であった。

弾性線維腫の発生に関しては遺伝的要因の影響が大きいことから、これらと密接な関係を有する体質や民族的な面との関連性が重視されねばならない。

弾性線維腫が奄美諸島、沖縄本島およびその周辺の島々で多く発見されているにもかかわらず、宮古、八重山地方での発生が少ないことは、今後、検診対象をひろげるとともに民族的、歴史的観点を含め継続して調査研究する必要がある。

結 語

沖縄県内で発見された弾性線維腫 141例の概略を報告するとともに一覧表を作製した。また沖縄県内離島で行った集団検診の機会に調査した弾性線維腫の発生頻度を報告し若干の考察をおこなった。

最後に症例検索に際し種々御協力下さいました諸先生に感謝いたします。また集団検診に際する沖縄県医事課、関係市町村当局、住民の御協力を感謝いたします。

追記：1979年1月に実施された八重山竹富島(186名)、小浜島(83名)の検診で竹富島出身の2名に背部弾性線維腫が発見された。

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Table 1. Summary of the Cases of Elastofibroma Studied by the Authors

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm) (S.S.: Subscapular. Inf-ol: Infraolecranon. Ish. tub.: Isthial tuberosity)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
¹ K.H.	73 F	Tokasiki	Farmer	Rt.S.S: 8×5.5×3 (excised)	8 m.	40ys.	Rt.	(-)
² M.S.	68 M	Ohzato	Farmer	Lt.S.S: 14×8×4.5 (excised) Rt.S.S: 6×6 (not excised)	1 w.	55ys.	Rt.	(-)
³ T.S.	63 F	Naha	Peddler	Rt.S.S: 6.5×5.5×3 (excised)	2 ys.	15ys.	Rt.	(-)
⁴ S.K.	81 F	Naha	Farmer	Lt.S.S: 14×13 (biopsy) Rt.S.S: 10×10 (not excised)	43ys.	20ys.	Rt.	Case 5 (daughter)
⁵ H.H.	60 F	Naha	Farmer Bean-curd dealer	Lt.S.S: 7.5×5×2.5 (excised) Rt.S.S: 8.5×5×4.5 (excised)	Lt.: 1 y. Rt.: 1 m.	35ys.	Rt.	Case 4 (mother)
⁶ H.Y.	50 F	Iheya	Farmer	Rt.S.S: 6.5×5.5×3 (excised)	4 m.	26ys.	Rt.	Case 7 (sister)
⁷ M.M.	67 F	Iheya	Farmer	Lt.S.S: 11×7×3 (excised)	5 ys.	20ys.	Rt.	Case 6 (sister)

8 H.A.	58 F	Naha	Farmer Peddler	Lt.S.S : 9 × 8 × 5 (excised) Rt.S.S : 10 × 9 (not excised)	Lt. : 1 y.	22ys.	Rt.	(-)
9 I.K.	73 F	Higasi	Farmer	Lt.S.S : 3 × 3 (not excised) Rt.S.S : 6.5 × 4.5 × 3.5 (excised)	Rt. : 6 m.	55ys.	Rt.	(-)
10 S.U.	70 F	Nakizin	Farmer	Lt.S.S : 4.5 × 3.5 × 3 (excised)	5 ys.	55ys.	Rt.	(-)
11 H.K.	79 F	Naha	Farmer Bean-curd dealer	Rt.S.S : 8 × 6.5 (biopsy)	2 ys.	35ys.	Rt.	(-)
12 T.T.	70 F	Zamami	Farmer	Lt.S.S : 9.5 × 7 × 3.5 (excised) Rt.S.S : 5.5 × 5 (not excised)	5 - 6 ys.	27ys.	Rt.	(-)
13 T.M.	63 F	Yonabaru	Farmer	Lt.S.S : 6.2 × 5.5 × 3 (excised) Rt.S.S : 2.5 × 2.5 (not excised)	6 m.	20ys.	Rt.	(-)
14 A.E.	73 F	Naha	Farmer	Lt.S.S : 2.5 × 2.5 (not excised) Rt.S.S : 7 × 7 (biopsy)	1 y.	40ys.	Rt.	(-)
15 K.H.	65 F	Itoman	Farmer	Lt.S.S : 6.5 × 6 (not excised) Rt.S.S : 6 × 6 (biopsy)	3 w.	48ys.	Rt.	Grandfather

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
16 K.K.	67 F	Kochinda	Farmer	Rt.S.S : 10×8 (biopsy) Lt.Inf-ol : 3×2.5 (biopsy)	S.S : 2y10m. Inf-ol : doctor finding	50ys.	Rt.	(-)
17 A.U.	80 F	Itoman	Farmer	Lt.Inf-ol : 6×4.5×1.5 (excised) Recurrence : 4×2.8×0.9 (excised) Rt.Inf-ol : 1.5×1.5 (biopsy)	Lt : 1 y. Rt : doctor finding	61ys.	Rt.	Case 34(sister)
18 I.T.	60 F	Naha	Farmer	Lt.S.S : fist-size (excised) Rt.S.S : 7×7 (not excised)	3 ys.	32ys.	Rt.	(-)
19 S.H.	67 F	Urasoe	Farmer	Lt.S.S : 7×5 (biopsy) Rt.S.S : 6×4 (not excised)	3 m.	47ys.	Rt.	(-)
20 A.U.	71 F	Itoman	Farmer	Lt.S.S : 4×3×1.4 (excised) Rt.S.S : 2.5×2.5 (not excised)	1 y.	58ys.	Rt.	Case 21(aunt)
21 Y.K.	88 F	Itoman	Farmer	Lt.S.S : 6×4.5 (not excised) Rt.S.S : 3.5×3.5 (not excised)	30ys.	40ys.	Rt.	Case 20(niece)
22 S.Y.	59 F	Kochinda	Farmer	Lt.S.S : 8×7 (biopsy) Rt.S.S : 8.5×8.5 (biopsy)	3 m.	23ys.	Rt.	(-)

23 I.H.	70 F	Naha	Housewife	Rt.S.S : 8.5×6×1.5 (excised)	Incidental finding during thoracotomy	(-)	Rt.	(-)
24 K.K.	62 F	Itoman	Farmer Manual labour	Rt.S.S : 4.5×4 (biopsy)	20days.	27ys.	Rt.	(-)
25 N.M.	74 F	Motobu	Manual labour	Lt.S.S : 2×2×0.8 (excised)	Incidental finding during thoracotomy	36ys.	Rt.	(-)
26 Y.T.	82 F	Nakazato	Farmer Peddler	Lt.S.S : 4×4 (not excised) Rt.S.S : 5×4 (biopsy) Lt.Inf-ol : 2.5×2 (not excised)	S.S : 2 m. Inf-ol : doctor finding	24ys.	Rt.	(-)
27 T.T.	59 F	Tonaki	Farmer Housewife	Lt.S.S : 8×7.5 (biopsy) Rt.S.S : 5×5 (not excised) Lt.Inf-ol : 2.5×2×0.5 (excised)	S.S : 10ys. Inf-ol : 5-6 ys.	25ys.	Rt.	Case 28, 29, 30 (sister) Case 72 (second cousin), Mother.
28 U.M.	78 F	Tonaki	Farmer	Rt.S.S : 11×10 (biopsy) Rt.Thorax : 5×3 (biopsy), 4.5×3 (not excised) Lt.Thorax : 4×3 (biopsy), 1.5×1.5 (not excised) Rt.Inf-ol : 4×3 (not excised) Lt.Inf-ol : 4.5×3.5 (biopsy)	S.S : 30ys. Others : 10ys.	55ys.	Rt.	Case 27, 29, 30 (sister) Case 72 (second cousin), Mother
29 T.H.	71 F	Tonaki	Farmer	Rt.S.S : 8×6 (biopsy) Lt.Inf-ol : 2×2 (biopsy)	S.S : 10ys. Inf-ol : doctor finding	41ys.	Rt.	Case 27, 28, 30 (sister) Case 72 (second cousin), Mother.
30 U.I.	76 F	Tonaki	Farmer	Lt.S.S : 12×11 (not excised) Rt.S.S : 10×10 (biopsy) Lt.Inf-ol : 3×3 (not excised) Rt.Inf-ol : 3×3 (biopsy)	S.S : 26ys. Inf-ol : 3 ys.	36ys.	Rt.	Case 27, 28, 29 (sister) Case 72 (second cousin), Mother.

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
31 A.K.	77 F	Kochinda	Farmer	Lt.S.S: 7 × 6.5 (biopsy) Rt.S.S: 6 × 6 (not excised)	10days	65ys.	Rt.	Case 32, 33 (sister)
32 M.U.	90 F	Kochinda	Farmer	Lt.S.S: 3 × 2.5 (not excised)	Doctor finding	45ys.	Rt.	Case 31, 33 (sister)
33 A.K.	94 F	Kochinda	Farmer	Lt.S.S: 9 × 8 (biopsy)	41ys.	40ys.	Rt.	Case 31, 32 (sister)
34 I.K.	77 F	Itoman	Farmer	Lt.S.S: 7.5 × 5.5 (biopsy) Rt.S.S: 7 × 5 (biopsy)	1 y.	60ys.	Rt.	Case 17 (sister)
35 A.M.	79 M	Naha	Farmer	Lt.S.S: 7.3 × 5 × 2.2 (excised) Rt.S.S: 3.5 × 3 (not excised)	Incidental finding during thoracotomy	66ys.	Rt.	Case 36, 37 (sister)
36 N.K.	85 F	Naha	Navy Peddler	Lt.S.S: 3.5 × 3.5 (not excised) Rt.S.S: 3 × 2 (not excised)	Doctor finding	44ys.	Rt.	Case 35 (brother) Case 37 (sister)
37 U.U.	82 F	Naha	Farmer Peddler	Lt.S.S: 4 × 3.5 (not excised) Rt.S.S: 7 × 6 (not excised)	1 y.	32ys.	Rt.	Case 35 (brother) Case 36 (sister)

38 K.M.	35 F	Naha	Nurse (retired) Housewife	Lt.S.S: 5.7×4×3.5 (excised) Rt.S.S: 4.5×4 (biopsy)	3 days 6 m.	(-)	Rt.	(-)
39 O.M.	72 F	Tonaki	Farmer	Lt.S.S: 6×5.5 (biopsy) Rt.S.S: 5×4.5 (not excised)	4 - 5 ys.	57ys.	Rt.	(-)
40 H.T.	76 F	Tonaki	Farmer	Lt.S.S: 9×8 (biopsy) Rt.S.S: 8×6 (not excised)	16ys.	48ys.	Rt.	Case 42 (sister) Case 61 (niece) Father, Mother, Aunt.
41 U.U.	73 F	Tonaki	Farmer	Lt.S.S: 7×7 (not excised) Rt.S.S: 11×10 (biopsy)	30ys.	31ys.	Rt.	Case 48 (niece)
42 H.M.	62 F	Tonaki	Farmer	Lt.S.S: 5×4 (not excised) Rt.S.S: 6.5×6 (biopsy)	20ys.	28ys.	Rt.	Case 40 (sister)
43 T.U.	72 F	Tonaki	Farmer	Lt.S.S: 7×6 (biopsy) Rt.S.S: 3.5×3.5 (not excised)	55ys.	5 ys.	Rt.	(-)
44 U.O.	67 F	Tonaki	Farmer	Rt.S.S: 6×5 (biopsy)	2 m.	57ys.	Rt.	(-)
45 H.H.	63 F	Tonaki	Farmer	Lt.S.S: 10×9 (not excised) Rt.S.S: 5.5×5 (biopsy)	3 ys.	46ys.	Rt.	Grandfather

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
46 U.K.	67 F	Tonaki	Farmer	Lt.S.S: 10×8.5 (not excised) Rt.S.S: 5×4 (not excised)	4 - 5 ys.	48ys.	Rt.	Mother
47 T.K.	75 F	Tonaki	Farmer	Lt.S.S: 6.5×5 (biopsy) Rt.S.S: 6×5 (not excised)	2 m.	48ys.	Rt.	(-)
48 O.K.	52 F	Tonaki	Farmer	Rt.S.S: 6×5.5 (biopsy)	2 m.	42ys.	Rt.	Case 41 (aunt)
49 H.T.	79 F	Tonaki	Farmer	Lt.S.S: 10×8 (biopsy) Rt.S.S: 7×6.5 (not excised)	20ys.	51ys.	Rt.	Case 55 (daughter) Case 66 (brother) Case 70 (sister) Father, Mother.
50 T.H.	73 F	Tonaki	Farmer Shopkeeper	Lt.S.S: 8×7 (biopsy) Rt.S.S: 3.5×3 (not excised)	2 - 3 ys.	56ys.	Rt.	Grandmother
51 H.T.	82 F	Tonaki	Farmer	Lt.S.S: 6×5 (not excised)	Doctor finding	65ys.	Rt.	(-)
52 H.K.	74 F	Tonaki	Farmer	Lt.S.S: 9.5×8 (biopsy) Rt.S.S: 8×7 (not excised)	2 - 3 ys.	59ys.	Rt.	(-)

53 O.T.	76 F	Tonaki	Farmer	Lt.S.S : 4 × 4 (biopsy)	16ys.	48ys.	Rt.	(-)
54 O.K.	76 M	Tonaki	Farmer Fisher	Lt.S.S : 7.5 × 6 (biopsy)	20ys.	42ys.	Rt.	Sister
55 H.Y.	47 F	Tonaki	Farmer	Lt.S.S : 3.5 × 3.5 (not excised) Rt.S.S : 3.5 × 3.5 (not excised)	Docter finding	35ys.	Rt.	Case 49 (mother) Case 66 (aunt) Case 70 (aunt) Grandfather Grandmother
56 H.K.	74 F	Tonaki	Farmer	Lt.S.S : 7 × 6.5 (not excised)	3 ys.	57ys.	Rt.	(-)
57 H.T.	98 F	Tonaki	Farmer	Lt.S.S : 6.5 × 6 (not excised) Rt.S.S : 8 × 7.5 (not excised)	5 ys.	35ys.	Rt.	(-)
58 H.U.	83 F	Tonaki	Farmer	Lt.S.S : 7 × 6 (not excised) Rt.S.S : 8 × 7 (biopsy)	10ys.	58ys.	Rt.	Mother
59 H.K.	72 F	Tonaki	Farmer	Lt.S.S : 7 × 6.5 (not excised) Rt.S.S : 7.5 × 7 (biopsy)	5 ys.	55ys.	Rt.	Mother, Sister
60 M.H.	61 F	Tonaki	Farmer	Lt.S.S : 7.5 × 7 (not excised) Rt.S.S : 7.5 × 7 (biopsy)	7 ys.	40ys.	Rt.	(-)

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
61 U.H.	49 F	Tonaki	Farmer	Lt.S.S: 6 × 6 (biopsy) Rt.S.S: 3.5 × 3.5 (not excised)	1 y. 6 m.	36ys.	Rt.	Case 40 (aunt) Mother Grandfather Grandmother
62 H.T.	73 F	Tonaki	Farmer	Lt.S.S: 4 × 4 (not excised) Rt.S.S: 5 × 5 (biopsy)	2 m.	57ys.	Rt.	(-)
63 H.K.	67 F	Tonaki	Farmer	Lt.S.S: 5 × 5 (biopsy) Rt.S.S: 6 × 5.5 (not excised)	10ys.	43ys.	Rt.	(-)
64 H.T.	68 F	Tonaki	Farmer	Lt.S.S: 3 × 2.5 (not excised)	2 ys.	50ys.	Rt.	Mother Grandmother
65 U.M.	76 F	Tonaki	Farmer	Lt.S.S: 10 × 9 (not excised) Rt.S.S: 9 × 8 (not excised)	5 ys.	61ys.	Rt.	Mother Grandmother
66 H.S.	73 M	Tonaki	Farmer Fisher	Lt.S.S: 5.5 × 5 (excised)	Doctor finding	51ys.	Rt.	Case 49, 70 (sister)
67 U.M.	73 F	Tonaki	Farmer	Lt.S.S: 7 × 7 (not excised) Rt.S.S: 8 × 7.5 (biopsy) Lt.Inf-ol: 3.5 × 3 (not excised)	S.S: 10ys. Inf-ol: doctor finding	55ys.	Rt.	Grandmother

68 U.K.	73 F	Tonaki	Farmer	Lt.S.S : 2.5×2.5 (not excised)		61ys.	Rt.	Case 75 (sister)
69 H.U.	66 F	Tonaki	Farmer	Lt.S.S : 4.5×3.5 (not excised) Rt.S.S : 8×7.5 (not excised)	3 ys.	49ys.	Rt.	Mother, Sister
70 T.K.	84 F	Tonaki	Farmer	Lt.S.S : 3.5×3 (not excised) Rt.S.S : 8×7 (biopsy)	2 m.	72ys.	Rt.	Case 49 (sister) Case 55 (niece) Case 66 (brother) Father, Mother.
71 U.M.	86 F	Tonaki	Farmer	Lt.S.S : 7×6 (not excised) Rt.S.S : 9.5×8 (biopsy) Lt.Inf-ol : 2.5×2 (not excised)	S.S : 36ys. Inf-ol : docter finding	35ys.	Rt.	Case 76 (sister)
72 U.K.	77 F	Tonaki	Farmer	Lt.S.S : 11×8 (biopsy) Rt.S.S : 10×9 (not excised) Lt.Inf-ol : 3.5×3 (not excised)	S.S : 17ys. Inf-ol : docter finding	46ys.	Rt.	Case 27, 28, 29, 30 (second cousin) Mother.
73 U.K.	83 F	Tonaki	Farmer	Lt.S.S : 7×6 (biopsy) Rt.S.S : 4×4 (not excised) Lt.Inf-ol : 3.5×3 (not excised)	S.S : 2 m. Inf-ol : docter finding	43ys.	Rt.	(-)
74 U.K.	77 F	Tonaki	Farmer	Lt.S.S : 11×10 (biopsy) Rt.S.S : 11×9 (not excised)	27ys.	38ys.	Rt.	(-)
75 U.K.	66 F	Tonaki	Farmer Manual labour	Lt.S.S : 5.5×5 (not excised) Rt.S.S : 5.5×5 (not excised)	5 ys.	49ys.	Rt.	Case 68 (sister)

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
76 T.K.	79 F	Tonaki	Farmer	Lt.S.S: 7 × 6 (not excised) Rt.S.S: 6 × 6 (biopsy)	5 ys.	62ys.	Rt.	Case 71 (sister)
77 N.H.	72 F	Motobu (Sesoko)	Farmer	Lt.S.S: 8 × 7.5 (biopsy) Rt.S.S: 7.5 × 7.5 (not excised)	10ys.	45ys.	Rt.	(-)
78 M.T.	75 F	Naha	Housewife	Lt.S.S: 7.5 × 7.5 (biopsy) Rt.S.S: 4.5 × 3.5 (not excised) Lt.Inf-ol: 4.5 × 3.5 (biopsy)	S.S: 20 days Inf-ol: doctor finding	(-)	Rt.	(-)
79 A.N.	59 F	Kochinda	Farmer Spinner	Lt.S.S: 8 × 8 (biopsy) Rt.S.S: 6 × 5 (not excised)	2 m.	43ys.	Lt.	Case 31, 32, 33 (aunt)
80 M.T.	54 F	Sasaki	Farmer Housemaid	Rt.S.S: 7 × 6 × 3.5 (excised)	1 y. 6 m.	39ys.	Rt.	(-)
81 T.U.	69 F	Tonaki	Farmer	Lt.S.S: 5.5 × 5 (biopsy) Rt.S.S: 5 × 5 (not excised)	4 ys.	51ys.	Rt.	Aunt.
82 T.S.	80 M	Izena	Farmer Fisher	Lt.S.S: 6 × 6 (biopsy) Rt.S.S: 4.5 × 3.5 (not excised) Lt.Inf-ol: 2 × 2 (not excised)	S.S: 1 y. Inf-ol: doctor finding	67ys.	Rt.	(-)

83 M.M.	63 F	Aguni	Farmer	Lt.S.S : 5 × 3.5 × 3.5 (excised)	1 m.	23ys.	Rt.	Case 85 (sister)
84 G.K.	67 F	Tomigusu- ku	Farmer Housewife	Rt.S.S : 3.5 × 3 × 0.4 (excised)	Incidental finding during thoraco- tomy	20ys.	Rt.	(-)
85 N.Y.	71 F	Aguni	Manual labour	Rt.S.S : 7 × 5.5 (biopsy)	10ys.	28ys.	Rt.	Case 83 (sister)
86 Y.Y.	72 F	Itoman	Farmer	Lt.S.S : 3 × 3 (disuse) Rt.S.S : 3 × 3 (biopsy)	10days	41ys.	Lt.	(-)
87 Y.U.	71 F	Tokasaki	Farmer	Lt.S.S : 6 × 5 (biopsy) Rt.S.S : 5 × 4 (not excised) Rt.Ish.tub. : 3 × 3 (biopsy) Lt.Inf-ol : 4 × 3 (biopsy)	S.S.doctor finding Ish.tub. : 4-5ys. Inf-ol : 3 m.	40ys.	Rt.	(-)
88 K.U.	76 F	Tokasaki	Farmer	Lt.S.S : 7.5 × 7.5 (not excised) Rt.S.S : 8 × 7.5 (biopsy) Lt.Inf-ol : 3 × 2.5 (biopsy) Rt.Inf-ol : 2.5 × 2 (not excised)	S.S. : 7 ys. Inf-ol : doctor finding	59ys.	Rt.	(-)
89 K.U.	85 F	Tokasaki	Farmer	Lt.S.S : 10.5 × 8.5 (biopsy) Rt.S.S : 4.5 × 4.5 (not excised)	67ys.	8 ys.	Rt.	(-)
90 A.Y.	66 F	Tokasaki	Farmer	Rt.S.S : 4.5 × 4.5 (biopsy) Lt.Inf-ol : 3 × 2.5 (not excised) Rt.Inf-ol : 2.5 × 2 (not excised)	Doctor finding	54ys.	Rt.	(-)

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
91 K.T.	77 F	Tokasiki	Farmer	Lt.S.S : 5.5×5.5 (biopsy)	Docter finding	65ys.	Rt.	(-)
92 G.T.	58 F	Itoman	Spinner Seamstress Shopkeeper	Rt.S.S : 3 × 3 (biopsy)	2 ys.	2 ys.	Rt.	(-)
93 T.M.	62 F	Aguni	Farmer	Lt.S.S : Fist-size (excised)	1 y.	44ys.	Rt.	(-)
94 K.T.	63 F	Katsuren	Farmer	Rt.S.S : 6.5×4.5×1.5 (excised)	8 m.	30ys.	Rt.	(-)
95 A.K.	61 F	Tokasiki (Maezima)	Shopkeeper Farmer Manual labour	Lt.S.S : 6 × 5 (biopsy) Rt.S.S : 6 × 6 (biopsy) Rt.Ish.tub. : 3 × 3 (biopsy)	S.S : 10 days. Ish.tub. : docter finding	16ys.	Rt.	(-)
96 S.O.	70 F	Aguni	Farmer	Rt.S.S : 4.5×4.5 (biopsy)	Docter finding	49ys.	Rt.	(-)
97 Y.O.	66 F	Aguni	Farmer	Lt.S.S : 7 × 6.5 (not excised) Rt.S.S : 8 × 7 (biopsy)	36ys.	6 ys.	Rt.	(-)

98 N.K.	78 F	Aguni	Farmer	Lt.S.S: 9 × 8.5 (biopsy) Rt.S.S: 8 × 7 (not excised) Lt.Inf-ol: 4.5 × 4 (not excised) Rt.Inf-ol: 2.5 × 2 (not excised)	S.S: doctor finding Lt.Inf-ol: 5 ys. Rt.Inf-ol: 2 ys.	30ys.	Rt.	(-)
99 Y.H.	66 F	Aguni	Farmer	Lt.S.S: 7 × 7 (not excised) Rt.S.S: 7.5 × 7 (biopsy)	3 ys.	51ys.	Rt.	(-)
100 S.K.	80 F	Aguni	Farmer	Lt.S.S: 5 × 5 (not excised) Rt.S.S: 9 × 8 (biopsy) Lt.Inf-ol: 4 × 3.5 (not excised) Rt.Inf-ol: 3.5 × 3 (not excised)	S.S: 2 ys. Inf-ol: doctor finding	60ys.	Rt.	(-)
101 S.K.	69 F	Aguni	Farmer	Lt.S.S: 9.5 × 8 (biopsy) Rt.S.S: 4 × 4 (not excised)	10ys.	47ys.	Rt.	(-)
102 S.K.	79 F	Aguni	Farmer	Lt.S.S: 9 × 8 (biopsy) Rt.S.S: 6 × 6 (not excised) Lt.Inf-ol: 4 × 3 (not excised) Rt.Inf-ol: 3 × 2 (not excised)	S.S: 34ys. Inf-ol: doctor finding	37ys.	Rt.	(-)
103 A.T.	68 F	Aguni	Farmer	Rt.S.S: 6 × 6 (biopsy)	Doctor finding	44ys.	Rt.	(-)
104 S.M.	70 F	Aguni	Farmer	Lt.S.S: 6.5 × 6 (biopsy)	4 ys.	27ys.	Rt.	(-)
105 U.O.	71 F	Aguni	Farmer	Lt.S.S: 9 × 6.5 (biopsy) Rt.S.S: 6 × 5.5 (not excised) Lt.Inf-ol: 2.5 × 2 (not excised)	S.S: 7 ys. Inf-ol: doctor finding	41ys.	Rt.	(-)

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
106 K.K.	83 F	Aguni	Farmer	Lt.S.S: 8.5×6.5 (not excised) Rt.S.S: 6.5×6 (biopsy) Lt.Inf-ol: 1.5×1 (not excised) Rt.Inf-ol: 1.5×1 (not excised)	S.S: 6 ys. Inf-ol: docter finding	64ys.	Rt.	(-)
107 I.E.	71 F	Aguni	Farmer	Lt.S.S: 8×7 (not excised) Rt.S.S: 7×6 (biopsy)	2 ys.	32ys.	Rt.	(-)
108 S.T.	74 F	Aguni	Farmer	Lt.S.S: 7×7 (biopsy) Rt.S.S: 3×3 (not excised)	1 ys.	49ys.	Rt.	(-)
109 T.S.	70 F	Aguni	Farmer	Lt.S.S: 4×4 (biopsy)	40ys.	20ys.	Rt.	(-)
110 S.Y.	50 F	Aguni	Farmer	Lt.S.S: 4×4 (biopsy)	Docter finding	32ys.	Rt.	(-)
111 S.K.	54 F	Aguni	Farmer	Lt.S.S: 5×5 (biopsy)	Docter finding	44ys.	Rt.	(-)
112 A.U.	64 F	Aguni	Farmer	Lt.S.S: 4×4 (not excised) Rt.S.S: 7×6 (biopsy)	Docter finding	50ys.	Rt.	(-)

113 S.M.	69 F	Aguni	Farmer	Lt.S.S : 6.5×6.5 (biopsy) Rt.S.S : 5×4.5 (not excised)	1 y.	56ys.	Rt.	Mother Sister
114 S.K.	81 F	Aguni	Farmer	Rt.S.S : 7.5×7.5 (biopsy)	5 ys.	57ys.	Rt.	(-)
115 O.F.	66 F	Aguni	Farmer	Lt.S.S : 6×6 (biopsy) Rt.S.S : 4×3.5 (not excised)	Docter finding	53ys.	Rt.	(-)
116 I.K.	83 F	Aguni	Housewife Farmer	Lt.S.S : 6.5×5 (biopsy) Rt.S.S : 6×5.5 (not excised)	45ys.	(-)	Rt.	Mother
117 O.K.	88 F	Aguni	Farmer	Lt.S.S : 7×7 (biopsy)	20ys.	56ys.	Lt.	(-)
118 O.U.	72 F	Aguni	Farmer	Lt.S.S : 6×6 (biopsy)	10ys.	26ys.	Rt.	(-)
119 S.K.	54 F	Aguni	Farmer	Lt.S.S : 9.5×8.5 (biopsy) Rt.S.S : 8×8 (not excised) Lt.Inf-ol : 2×2 (not excised)	S.S : 34ys. Inf-ol : docter finding	(-)	Rt.	Grandmother
120 S.S.	73 F	Aguni	Farmer	Rt.S.S : 4×3 (biopsy)	Docter finding	48ys.	Rt.	(-)

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
121 I.S.	74 F	Aguni	Farmer	Rt.S.S: 6.5×6.5 (biopsy) Lt.Inf-ol: 3.5×3 (not excised)	Doctor finding	50ys.	Rt.	(-)
122 K.O.	67 F	Aguni	Farmer	Lt.S.S: 7×6 (not excised) Rt.S.S: 6×6 (biopsy)	10ys.	36ys.	Rt.	(-)
123 S.U.	72 F	Aguni	Navy Farmer	Lt.S.S: 5×4.5 (biopsy) Rt.S.S: 4.5×4 (not excised)	32ys.	22ys.	Rt.	(-)
124 M.K.	71 M	Aguni	Farmer Carpenter	Lt.S.S: 9×8 (biopsy) Rt.S.S.: 5×5 (not excised)	Doctor finding	45ys.	Rt.	(-)
125 Y.K.	84 F	Aguni	Farmer	Rt.S.S: 6×6 (biopsy)	10ys.	48ys.	Rt.	(-)
126 N.K.	78 F	Aguni	Farmer	Rt.S.S: 5.5×5 (biopsy)	Doctor finding	56ys.	Rt.	(-)
127 K.O.	77 F	Aguni	Farmer	Lt.S.S: 9×8.5 (biopsy) Rt.S.S: 7×7 (not excised)	52ys.	8 ys.	Rt.	(-)

128 M.K.	67 F	Aguni	Farmer	Lt.S.S : 8 × 7 (biopsy) Rt.S.S : 7 × 7 (not excised)	27ys.	18ys.	Rt.	Case 131 (sister)
129 A.S.	71 M	Aguni	Operative Farmer	Lt.S.S : 5 × 5 (biopsy) Rt.S.S : 3 × 2.5 (not excised)	Docter finding	51ys.	Rt.	(-)
130 Y.U.	80 F	Aguni	Farmer	Lt.S.S : 9 × 8 (biopsy) Rt.S.S : 9 × 7.5 (not excised)	10ys.	43ys.	Rt.	(-)
131 T.K.	79 F	Aguni	Farmer	Lt.S.S : 6.5 × 6.5 (biopsy)	49ys.	6 ys.	Lt.	Case 128 (sister)
132 H.T.	75 M	Okinawa	Farmer	Lt.S.S : 4 × 3 (biopsy) Rt.S.S : 3.5 × 3 (not excised)	Docter finding	62ys.	Rt.	(-)
133 T.S.	54 F	Isigaki	Canvasser	Rt.S.S : 6 × 6 (biopsy)	6 m.	10ys.	Rt.	(-)
134 N.H.	42 F	Chinen (Kudaka)	Farmer Housewife	Lt.S.S : 5 × 5 (biopsy) Rt.S.S : 4 × 4 (not excised)	6 m.	12ys.	Rt.	(-)
135 U.K.	60 F	Iheya	Farmer Manual labour	Lt.S.S : 8 × 7 (not excised) Rt.S.S : 8 × 7 (biopsy)	Docter finding	38ys.	Rt.	(-)

Case	Age Sex	Birthplace	Occupation	Location and Size of Tumor (cm)	Length of history	History of heavy work until finding	Handed- ness	Familial occurrence
136 M.H.	57 F	Zamami	Farmer	Lt.S.S: 9 × 7.5 (biopsy)	8 ys.	38ys.	Lt.	Case 137 (cousin)
137 N.U.	58 F	Zamami	Farmer	Lt.S.S: 4 × 3 (biopsy)	1 y.	27ys.	Rt.	Case 136 (cousin)
138 Y.U.	88 F	Zamami	Farmer	Rt.S.S: 5 × 4 (biopsy)	Docter finding	75ys.	Rt.	(-)
139 K.K.	79 F	Zamami (Aka)	Farmer	Lt.S.S: 7 × 6 (biopsy) Rt.S.S: 3 × 3 (not excised) Lt.Inf-ol: 5 × 3 (not excised) Rt.Inf-ol: 2 × 2 (not excised)	Lt.S.S: 6 ys. Others: docter finding	53ys.	Rt.	(-)
140 K.C.	84 M	Motobu	Postmas- ter (retired)	Lt.S.S: 7 × 6 (biopsy) Rt.S.S: 6 × 5.5 (not excised)	6 m.	(-)	Rt.	(-)
141 T.M.	54 F	Sashiki	Farmer	Lt.S.S: 5.5 × 5 (not excised) Rt.S.S: 8 × 7 (biopsy)	Lt.S.S: 2 ys. Rt.S.S: docter finding	20ys.	Rt.	(-)

Table 2. The Frequency of Occurrence of Elastofibroma
(Group examination in Okinawa isls.)

Area	No. Consultation	No. Having Tumors.	Percent. Having Tumors.
Aguni isl.	140	39	27.9%
Tonaki isl.	190	43	22.6%
Tokashiki isl.	102	6	5.9%
Aka, Geruma isls.	72	2 (1 : from Iheya isl.)	2.8%
Motobu-Minna isl.	35	1(from Sesoko isl.)	2.85%
Minami Daito isl.	247	1(from Okinawa-city)	0.4%
Miyako			
Oogami isl.	27	0	0%
Kurima isl.	66	0	0%
Ishigaki isl.			
Omoto district	89	0	0%
Kapira district	201	0	0%
Yonaguni isl.	117	0	0%

Table 3. The Frequency of Occurrence of Elastofibroma in Tonaki Isl.

Age	Male			Female			Total
	No. Consultation	No. Having Tumors	Percent. Having Tumors	No. Consultation	No. Having Tumors	Percent. Having Tumors	Percent. Having Tumors
0-9	6	0	0	2	0	0	0
10-19	0	0	0	2	0	0	0
20-29	2	0	0	6	0	0	0
30-39	3	0	0	7	0	0	0
40-49	8	0	0	29	2	6.9%	5.4%
50-59	8	0	0	17	2	11.8%	8.0%
60-69	15	0	0	27	10	37.0%	23.8%
70-79	14	2	14.3%	32	21	65.6%	50.0%
80-89	1	0	0	8	5	62.5%	55.6%
90-	1	0	0	2	1	50.0%	33.3%
Total	58	2	3.4%	132	41	31.1%	22.6%

Abstract

Summary of Cases and Geographical Distribution of Elastofibroma in Okinawa

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Elastofibroma is rare soft tissue tumor. In the world literature, only 81 cases were reported except our cases.

141 cases of elastofibroma have been examined in our institution from 1973 to 1978.

In this paper, summary of the 141 cases and geographical distribution of the elastofibroma in Okinawa are reported.

1) Age and sex distribution

The tumor occurs mostly in elder people, predominantly among women. The eldest patient was 98 years of age, and the youngest patient was 35 years of age at the time of detection (m:71).

As to the differences between sexes, female was predominated with 132 cases and males were 9 cases.

2) Birthplace and occupation of patients

All patients were born in Okinawa. 137 cases of them had a history of hard manual labor and was mainly a farmer. Occupation of other 4 cases were house-wife (2 cases), retired nurse (one case), and retired postmaster (one case).

3) Familial occurrence

53 of 141 cases (37.6 %) had hereditary disposition. Especially, in the 43 cases from island of Tonaki, 67.4 % of cases strongly suggested the inheriting factor showing definite familial tendency.

4) Site of the tumor

The most common site of origin of the elastofibroma was subscapular region and 115 cases had elastofibroma at only that area. 21 of 141 cases had the simultaneous appearances of the tumors at the area of infraolecranon and the subscapular lesion. Further 3 cases with multiple appearances are as follows: the first case had a right subscapular lesion and four different tumors on bilateral thoracic walls and bilateral infraolecranon areas; the second case had bilateral subscapular lesions, and the lesions at the left infraolecranon and in the soft tissue adjacent to the right ischial tuberosity; the third case had bilateral subscapular lesions and a lesion in the soft tissue adjacent to the right ischial tuberosity.

Only one case of all had a sole lesion of elastofibroma on bilateral infraolecranon without subscapular lesion.

5) Duration of the illness

Duration of the illness varied from the time of detection to 67 years.

Some elastofibromas occurred in young adult life unexpectedly, of 17 years old (one case), 18 years old (one case), 20 years old (one case), 25 years old (one case), fourth decade (6 cases), and fifth decade (9 cases).

6) Geographical distribution

Many cases of the elastofibroma were found in Okinawa main island, Aguni island, Tonaki island and Tokashiki island.

On the other hand, none of patient was found in the districts of Miyako and Yaeyama islands (group examination).