

# A Case of Fibrolipoma on the Palm

Jong Kyu Yang, M.D., Young Min Park, M.D., Seog Jin Kang\*, M.D.,  
Hyung Ok Kim, M.D., Chung Won Kim, M.D., Tae Yoon Kim, M.D.

*Department of Dermatology and Pathology\*, College of Medicine,  
The Catholic University of Korea, Seoul, Korea*

**Fibrolipoma is a rare histological variant of lipoma characterized by proliferation of mature fat and fibrous tissue. Most of the benign lipomatous tumors in the palm reported in the literature developed in the nervous tissue, especially the median nerve sheath.**

**We report an unusual form of fibrolipoma on the palm which arose from the subcutaneous tissue or superficial palmar fascia in the palm, not the nerve or tendon sheath. There was no recurrence 3 years after surgical removal was performed.**

**(Ann Dermatol 11(3) 182~184, 1999).**

---

*Key Word* : Fibrolipoma, Palm

Fibrolipoma is a benign tumor caused by proliferation of mature adipocytes and fibrous tissues<sup>1</sup> and may be relatively rare especially in the dermatological field.

So far, most of the lipomas on the palm reported in the literature occurred in the neural tissue, especially the median nerves and digital nerves<sup>2,4</sup>, so-called "lipofibroma of the nerve".

Herein, we present an unusual form of fibrolipoma on the palm which arose from the subcutaneous tissue or superficial palmar fascia in the palm.

## CASE REPORT

A 74-year-old woman presented with an asymptomatic, dome-shaped, round, sessile, protruding soft tissue tumor with a firm consistency. It was also yellow-reddish in color and did not have an overlying skin. It was present on her right palm and had been growing slowly for more than 30 years (Fig. 1). It measured approximately 3 cm in diameter and 2 cm in height from the surface of her right palm. It had been covered with normal skin in the beginning, but 15 days previously, the skin overlying

the mass was denuded by cauterization with moxa. After that she noticed rapid growth of the tumor.

She had no symptoms such as pain, numbness, or motor weakness on her right palm. Neurological examinations of the right hand showed no motor or sensory deficits.

On surgical exploration, the base of the tumor was found to be localized to the superficial palmar fascia and the mass was easily excised as a whole. After the palmar fascia was removed, it was ascertained that a branch from the median nerve was well preserved. The raw surface of her right palm was covered with the split thickness skin graft harvested from her right lateral thigh.

Microscopically a diagnosis of fibrolipoma was made on the basis of predominantly fibrous components composed of abundant collagen bundles and the fatty lobules of mature adipocytes interposed between the bundles of the collagen fibers (Fig. 2). The mature fat cells intermingled and grouped with collagen bundles were scattered in the tumor. A prominent vascular proliferation, dense mononuclear cell infiltrates and multiple hemorrhagic foci of peripheral areas were found, and these findings were thought to be due to heat injury resulting from moxocautery of the skin overlying the mass. There were no neural tissues, dermal adnexal structures, myxoid areas, and spindle cell proliferations on the tissue section. Masson's trichrome staining revealed that green-colored collagen bundles

---

Received July 4, 1998.

Accepted for publication December 8, 1998.

**Reprint request to** : Jong Kyu Yang, M.D., Department of Dermatology, College of Medicine, The Catholic University of Korea, Seoul, Korea

Fig. 1. An asymptomatic, yellow-reddish, dome-shaped, protruding soft tissue mass with denuded skin on the right palm.

corresponded to those on H & E staining (Fig. 3).

After a 3-year-follow-up period, there was no evidence of recurrence.

## DISCUSSION

Fibrolipoma is a rare histological variant of lipoma and the benign tumor characterized by proliferation of normal mature fat and fibrous tissue<sup>1</sup>. It may develop not only in the subcutaneous tissue but also in many organs including the oral cavity<sup>5,6</sup>, respiratory tract<sup>7,8</sup> and gastrointestinal tract<sup>9</sup>. When fibrolipoma is originated from the nerve sheath, it has been called a lipofibroma of the nerve, lipofibromatous hamartoma of the nerve, fibrolipomatous hamartoma of the nerve or fibrolipoma of the nerve.

Clinically, fibrolipoma may be an asymptomatic slow growing mass with a firm or soft consistency. Microscopic examination of fibrolipoma reveals fibroadipose tissue composed of normal mature adipocytes and collagen bundles<sup>1,6</sup>. Fibrolipoma is usually encapsulated like lipoma<sup>6,10,11</sup>. However cases without encapsulation have been reported<sup>12</sup>. Our case showed an asymptomatic slow growing mass and a biopsy specimen revealed fibrofatty tissue

Fig. 2. Microscopic examination showed a fibrofatty tissue mass composed of mature adipocytes and abundant collagen bundles ( $\times 40$ , H&E stain).

Fig. 3. Masson's trichrome staining revealed abundant green-colored collagen bundles in the tumor mass ( $\times 40$ ).

entirely made up of mature adipose tissue and predominant fibrous tissue. We could not confirm whether the tumor was encapsulated because of its destruction by moxocautery.

The histological differential diagnoses include fibrolipoma of the nerve, nuchal fibroma, myxolipoma, fibrous hamartoma of infancy, spindle cell lipoma, pedunculated lipofibroma and myolipoma. However, unlike these diseases there were no neural tissues or nerve entrapments, myxoid areas, immature-appearing spindle cells or spindle cell proliferations, mature dermal adnexal structures and smooth muscle cells in our case. By a Masson's trichrome stain, fibrous components in the tissue section of our case were confirmed as collagens not muscle fibers.

The etiology of fibrolipoma was thought to be congenital probably by a genetically related abnormality in end organ responsiveness to some trophic factors, or acquired with no evidence of any mass until the later age of life<sup>6,10</sup>. The acquired ones may be associated with trauma, endocrine imbalance, products of a degenerated fibromatous tumor, or maturation of another tumor such as lipoblastomatosis<sup>6</sup>. It is conceivable that our case may not be congenital in origin because the mass had appeared since the age of 34. No trauma or medical history was noted in our case. So the pathogenesis of our case can be considered as degeneration of the fibrous tumor or maturation of the tumor such as lipoblastomatosis.

In the treatment of fibrolipoma, local excision may be useful because of its benign behavior. Local recurrence is usually rare but malignant transformation was reported<sup>13</sup>. When fibrolipoma involves the nerve, surgical interventions including decompression of the carpal tunnel, decompression and debulking of the fibroadipose sheath, microsurgical intraneural dissection of hamartomatous tissue, and excision of involved nerves with or without nerve grafting were recommended<sup>4</sup>. However, because of no evidence of nerve involvement in our case, total excision and skin grafting resulted in complete recovery and there was no recurrence for the period of a 3-year-follow-up.

When benign lipomatous tumors develops in the palm, most cases reported in the literature originated from the nerve tissue such as the median nerve and digital nerve. A case of lipofibromatous hamartoma in the palm arising from a tendon sheath of flexor pollicis longus was also reported by Kernohan *et al*<sup>14</sup> in 1984. Our case resembles these reported cases clinically but they can be differentiated based on the following findings; 1) There were no motor or sensory deficits on the neurological examinations of the right hand, 2) On surgical exploration, the superficial tumor mass was located on the superficial palmar fascia and the median nerve branch and other deep structures including palmar aponeurosis were well preserved. 3) There were no neural tissue entrapments on the tissue section.

In conclusion, we present an unusual form of fibrolipoma on the palm similar to neural ones. It arises from the subcutaneous tissue or superficial palmar fascia in the palm, not the nerve or tendon sheath.

## REFERENCES

1. Enzinger FM, Weiss SW: Soft tissue tumors. 3rd Ed. St. Louis: Mosby-Year Book, 1995, pp 381-430.
2. Spencer BY, Rowland A: Lipofibroma of the median nerve in the palm. *J Bone and Joint Surg* 49A:1309-1313, 1967.
3. Patel ME, Silver JW, Lipton DE *et al*: Lipofibroma of the median nerve in the palm and digits of the hand. *J Bone and Joint Surg* 61A:393-397, 1979.
4. Warhold LG, Urban MA, Bora FW Jr *et al*: Lipofibromatous hamartomas of the median nerve. *J Hand Surg* 18A:1032-1037, 1993.
5. Hatziotis JC: Lipoma of the oral cavity. *Oral Surg* 31:511-524, 1971.
6. Gallagher DM, Goldman E, Schaffer SD: Fibrolipoma of the cheek in a child. *J Oral Maxillofac Surg* 40:824-827, 1982.
7. Taniyama K, Sasaki N, Yamaguchi K *et al*: Fibrolipomatous hamartoma of the lung: a case report and review of the literature. *Japanese J Clin Oncol* 25(4):159-163, 1995.
8. Baharloo F, Corhay JL, Hotermans G *et al*: A case of tracheal fibrolipoma. *Acta Clin Belg* 49(1):23-25, 1994.
9. Cole FH, Hays A, Tucker C *et al*: Giant esophageal fibrolipoma: case report and review of the literature. *J Tenn Med Assoc* 80(5):267-269, 1987.
10. Saitoh Y, Hama T, Ishizaka S *et al*: Fibrolipoma of the parotid in a child. *Am J Otolaryng* 16(6):433-435, 1995.
11. Oppenheimer P, Hamit CH, Quinn FB: Fibrolipoma of the cheek. *Arch Otolaryng* 82:398-400, 1965.
12. Lee HJ, Park WH, Chang SN *et al*: A case of fibrolipoma. *Ann Dermatol* 9(1):69-72, 1997.
13. Reibel JF, Greene WM: Liposarcoma arising in the pharynx nine years after fibrolipoma excision. *Otolaryngol Head Neck Surg* 112(4):599-602, 1995.
14. Kernohan J, Dakin PK, Quain JS *et al*: An unusual giant lipofibroma in the palm. *J Hand Surg* 9(3):347-348, 1984.