

## Multiple Epidermoid Cysts of the Hand: A Case Report

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**Summary.** A 56-year-old man with multiple epidermoid cysts in his right hand is presented. Sensory disturbance and limitation of the flexion of all fingers improved after excision of the cysts. When a case with multiple subcutaneous nodules in the hand is seen, a diagnosis of multiple epidermoid cysts should be taken into consideration, in addition to neurofibromatosis and familial hypercholesterolaemic xanthomatosis.

Although an epidermoid cyst is one of the most common tumor-like conditions in the hand, a report of multiple epidermoid cysts arising in one hand seems to be rare.

### OBSERVATIONS

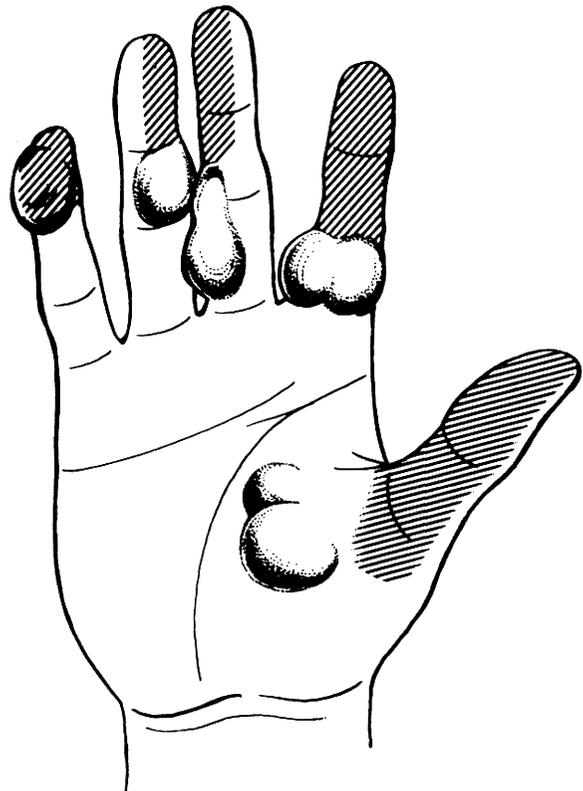
A 56-year-old man working in a gravel boat was admitted with a six year history of multiple subcutaneous nodules at the palmar aspect of his right hand. With the growth of the nodules, hypesthesia and limitation of finger flexion gradually developed. The patient stated that the first nodule appeared at the palmar aspect of the index finger followed by nodules at the thenar eminence and the palmar aspects of the long to little fingers, and gradually increased in size.

Physical examination revealed that there were five subcutaneous nodules at the thenar eminence and palmar aspects of all fingers on his right hand; three of them were felt to be bilobulated (Fig. 1). Nodules were 2 to 3 cm in diameter and elastic hard in consistency, but not tender to palpation. There was some limitation of flexion in the thumb and the index to ring fingers. Flexion of the index finger was particularly limited to only ten degrees at MP joint, making a pinch between this finger and the thumb difficult. Neurological examination revealed decreased sensi-

bility at the palmar aspect of the thumb and all fingers in the area distal to the nodules. Radiographic evaluation showed no bony involvement.

Excision of all those nodules was indicated with an impression of either neurofibromatosis or xanthomatosis.

*Operative findings:* Five nodules with whitish glossy capsule were located subcutaneously, with three of them found to have daughter nodules. All



**Fig. 1.** A schematic drawing showing the location of multiple nodules. Shaded areas are hypesthetic.

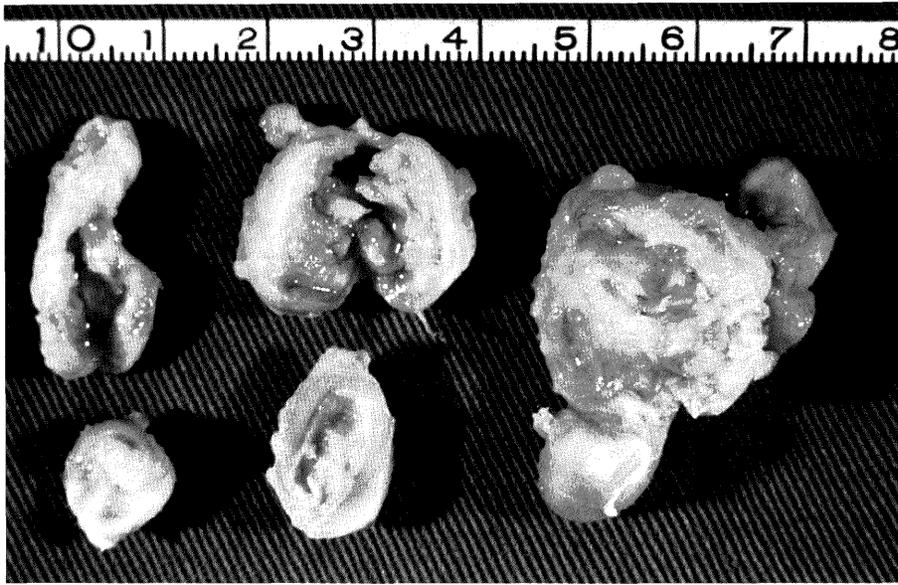


Fig. 2. The section reveals all removed specimens being cysts.

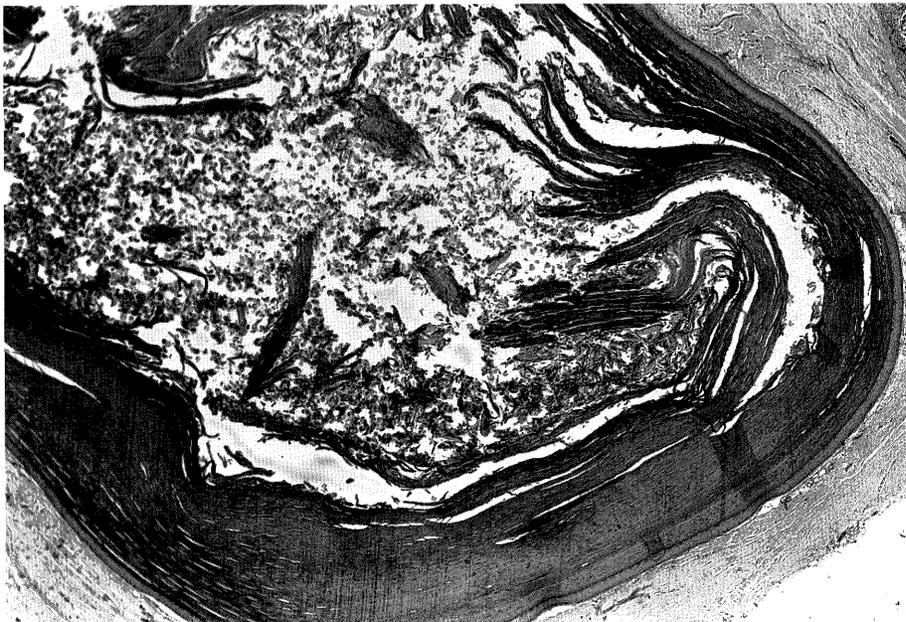
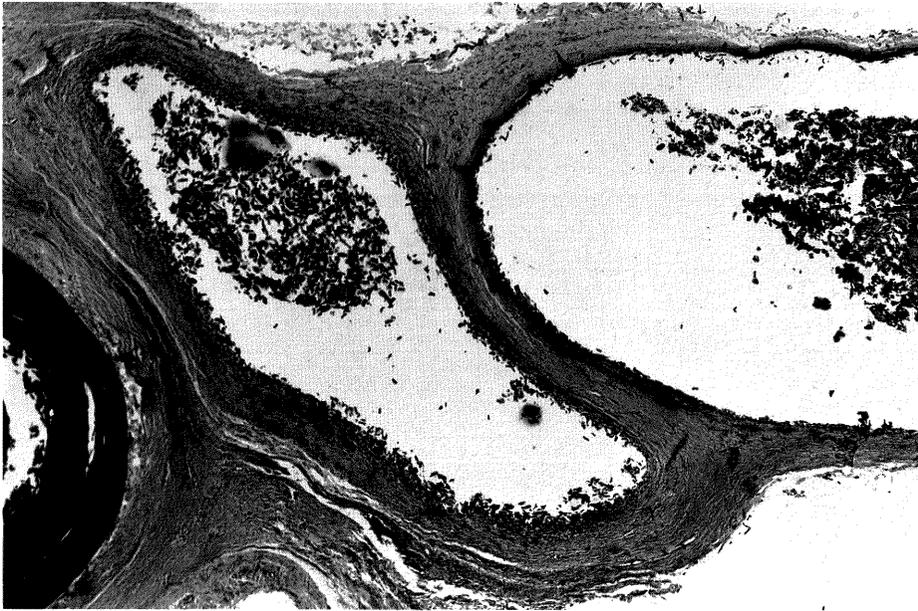


Fig. 3. Photomicrograph of a specimens excised from the index finger showing three cysts. A. A cyst showing typical structure of the epidermoid cyst.



**Fig. 3. B.** Another cyst shown on the right has a thin epidermis-like lining while the third shown on the left does not have it.



**Fig. 3. C.** A high magnification of the third cyst reveals flakes of keratin falling off the wall and accumulating in the cyst cavity.

nodules were dissected out of the surrounding tissue fairly easily, but with some difficulty from the overlying dermis. The digital nerves had been compressed by those nodules, particularly in the index and ring fingers.

*Pathological findings:* All these nodules were cysts containing whitish grayish material like bean-curd refuse (Fig. 2). The specimen excised from the index finger consisted of three cysts. One of them had a thick epidermis-like lining and was filled with keratin granules (Fig. 3A). Another had a thin epidermis-like lining, while the third did not have such a lining though keratin was found in it (Fig. 3B and C). Similar histological findings were observed in other specimens and a diagnosis of multiple epidermoid cysts was made.

At the follow-up made seven years after the operation, three nodules were found at the thenar eminence and the palmar aspect of the index and ring fingers of his right hand, and a new nodule was found on his left hand. The patient stated that the nodules in his right hand had recurred by one year after the operation. The patient refused further treatment.

## DISCUSSION

Among tumors and tumor-like conditions of the hand, an epidermoid cyst occurs relatively frequently as reported by Boyes<sup>1)</sup> (8.4%), Posh<sup>2)</sup> (4.1%), Butler<sup>3)</sup>

(8.4%) and Glicenstein<sup>4)</sup> (7.5%). Of 194 soft tissue tumors of the hand treated in our department over the last ten years, seven (3.6%) were epidermoid cysts. Only the case here had multiply located cysts. A search of the literature revealed only one case with two epidermoid cysts in the palm of a hand, reported by Posh<sup>2)</sup> in 1956.

Multiple subcutaneous nodules in the hand are more likely to be neurofibromatosis or familial hypercholesterolaemic xanthomatosis.<sup>1,4)</sup> This report, however, suggests that multiple epidermoid cysts can occur in the hand, and such a possibility should also be considered.

This paper is dedicated to the memory of Dr. Hiroshi Hashimoto, the late director of Niigata Chuo Hospital who treated this case with the authors.

## REFERENCES

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- 4) Glicenstein J, Ohana J, Leclercq C: Tumours of the hand. Springer-Verlag, Berlin, p XI, 67, 123-126, 1988.