PRIMARY FIBROMYOMA OF THE BREAST

REPORT OF A CASE AND REVIEW OF THE LITERATURE

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While fibromyoma originating in the nipple is distinctly uncommon, its occurrence in the breast independently of the nipple is so rare that the question has been raised by Driak and Sternberg (1) whether it actually occurs in this location. Neither Ewing (2) nor Cheatle and Cutler (3) make mention of it in their monographs. Kleinschmidt (4) does not list fibromyoma of the mammary parenchyma among the benign tumors of the breast.

The first instance of a leiomyoma of the breast proper is that reported by Strong (5). The structure in this case was highly suggestive of an origin from the smooth muscle cells of the walls of the blood vessels. Lieber (6) described three cases of leiomyoma of the breast, one of which originated in the parenchyma and the others in the nipple. The third example was recently reported by Melnick (7).

The case of Schauder (8) should be designated as a myoblastic sarcoma in spite of the absence of clinical evidence of infiltration and metastases. Among the photomicrographs illustrating his report is one which shows anaplastic and degenerated myoblastic tumor cells, thus favoring the diagnosis of leiomyosarcoma.

CASE REPORT

A married white woman, fifty-eight years of age, was admitted to the hospital in January 1937, complaining of a lump in the right breast, first observed seventeen years earlier. It had increased in size slowly and progressively until it produced so much discomfort in the breast and aching of the right shoulder by its weight that the patient was compelled to seek relief. She appeared well nourished and in good health. The blood and urine were normal. The Wassermann and Kahn blood tests were negative.

On examination, a large, firm, freely movable, sharply circumscribed mass was palpated in the center of the breast beneath the nipple, which was not involved. The tumor was not tender or fluctuant. The axillary lymph nodes were not enlarged.

On Jan. 16, 1937, under ether anesthesia, a conservative amputation of the right breast was performed. Convalescence was uneventful.

Gross examination showed the breast to be greatly enlarged. Occupying roughly the central two-thirds of the organ and extending down to the pectoral fascia was a circumscribed, well encapsulated, firm, ovoid mass, measuring 13.8 cm. (Fig. 1). It cut with greatly increased resistance, disclosing a semi-translucent, grayish, lobulated surface with a pattern of interlacing whorls and strands suggestive of a fibroma. The surface of the growth was dotted with a few minute cysts. The nipple and areola were intact and separated from the growth by a margin of normal breast tissue 2.5 cm. in thickness. In spite of repeated sections no secondary tumor nodules were found in the breast. There was no gross evidence of tumor infiltration.

Microscopic Description: A large number of representative preparations stained with hematoxylin and erythrosin, van Gieson's, Masson's hematein-erythrosin-saffron, Hart's mod-
FIG. 1. RIGHT BREAST SECTIONED LONGITUDINALLY, SHOWING FIBROMYOMA

FIG. 2. CHARACTERISTIC MYOMATOUS BUNDLE SURROUNDED BY COLLAGEN.
VAN GIESON STAIN. × 250
PRIMARY FIBROMYOMA OF THE Breast

ification of Weigert’s elastic method, Mallory’s phosphotungstic acid-hematoxylin, and aniline blue-orange G, and impregnated for reticulum according to the Wilder method, were examined. In addition, frozen sections were observed under polarized light for the separation of the dark smooth muscle from the lighter connective tissue, by the v. Ebener technic (9).

The tumor was surrounded by a connective-tissue capsule which separated it from the normal breast tissue. It was composed largely of a matrix of interweaving bundles of wavy collagen fibrils sparsely populated with cells. This matrix was well vascularized by small thin-walled spaces often lined only by endothelium. Lymph vessels were of frequent occurrence. The fibroglia fibrils of Mallory were regularly present and in some areas were quite abundant. No teratoid or glandular elements were observed. Secondary degenerative changes were not seen. Occasional islands of fat cells, the remnants of the invaded organ, were noticed. A few reticulum fibers were observed.

The tumor also contained many small, irregularly outlined bundles of mature smooth muscle cells, which stained typically (Fig. 2), and exhibited a characteristic dark appearance under polarized light. Sections stained with Mallory’s phosphotungstic acid-hematoxylin showed the fine intracellular myofibrils characteristic of mature smooth muscle cells. The myomatous bundles were poorly vascularized but contained a delicate stroma of fibrous tissue. Transition of these bundles to blood vessels was not traced, and there was no fusion with the latter. No evidence of hyperplasia of smooth muscle cells of blood vessels nor of embryonal inclusions of smooth muscle cells was observed either in the breast or in the tumor.

From the morphology of the tumor cells and their products, the number of mitotic figures, and the absence of tissue infiltration or invasion of blood vessels and lymphatics, this tumor must be considered as benign.

SUMMARY

The fourth case of fibromyoma of the breast arising from the parenchyma and independently of the nipple is reported. It occurred in a woman fifty-eight years of age. Like other fibromymomata of this type, the tumor was painless in contrast to those originating in the nipple. The origin of the growth could not be determined with certainty.

Hesources

4. KLEINSCHMIDT, O.: Chirurg. 3: 297, 1931.