SPONTANEOUS CURE OF A CONGENITAL RECURRING CONNECTIVE-TISSUE TUMOR

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Disappearance of supposedly malignant tumors after various forms of medical and non-medical treatment are reported from time to time, and the method of treatment which was used in the particular case is naturally given the credit for producing a cure. In the following case a spontaneous cure was obtained after two unsuccessful attempts at surgical removal of the growth and in the absence of any other form of treatment. Histologic study of both biopsy specimens in two different laboratories led to the diagnosis of fibrosarcoma.

CASE REPORT

A six-months-old girl was admitted to St. Luke's Hospital on Nov. 20, 1929, with the diagnosis of recurrent tumor of the interscapular region. The mother stated that the child was born with a tumor on the back. The growth increased in size and was removed surgically by the obstetrician when the baby was two and one-half months old. The tissue was sent to the State Institute for the Study of Malignant Disease in Buffalo, New York, where the diagnosis of fibrosarcoma was made. Within two weeks following the excision of the growth, a recurrence was discovered beneath the scar; this persisted and increased in size.

Examination showed a normally developed girl without congenital abnormalities. In the midline of the back at the level of the scapulae was a raised mass about 5 cm. in diameter, fixed to the overlying skin by a transverse, healed surgical scar. The tumor was firm, movable with the skin and underlying muscles, and was not tender (Fig. 1).

Fig. 1. Photograph of child showing recurrent interscapular tumor

1 Personal communication from Doctor A. A. Thibaudeau.
The diagnosis of recurrent, operable fibrosarcoma was made and surgical removal attempted. At the time of operation, however, tumor tissue was found widely infiltrating the underlying muscles and overlying skin, and complete excision was impossible. A wedge-shaped piece was removed from the center of the growth for histologic study, the bulk of the tumor being left in situ. The wound edges were united with interrupted horsehair sutures.

Pathologic Report (by Doctor L. C. Knox): The specimen consists of a piece of skin and tumor from the interscapular region. The skin is triangular in shape and measures $4 \times 4.5 \times 2.2$ cm. It overlies a mass of opaque, homogeneous, white tumor tissue which is 2 cm. thick. Histologic study shows a portion of the skin surface with relatively normal epithelium and corium. The superficial layers of the fibrous tissue are also normal. Beneath this is a solid mass of tumor invading the fat and muscle. It is of the connective-tissue type, is not extremely cellular, and is undergoing both hyaline and myxomatous degeneration. The nuclei are elongated, rather plump, and are not extremely hyperchromatic; mitoses are not numerous. The tumor is of the type, however, which is likely to recur even though thoroughly removed. Diagnosis: fibrosarcoma, possibly of a neurogenic origin (Fig. 2).

Subsequent Course: The wound healed by first intention and the patient was discharged from the hospital on the eleventh postoperative day. A letter from the mother, dated March 23, 1930, stated that the child was well and that the growth was slightly larger than it was when she had left the hospital three months previously. At her first follow-up visit, on July 29, 1930, the mass had decreased in size. This improvement was spontaneous and had occurred in the absence of any further surgical, radiation, or medicinal therapy. The patient was pale but was growing normally and appeared to be in good health. A letter dated Jan. 27, 1931, thirteen months after operation, stated that the condition was about the same as in July. On May 29, 1931, the patient was examined and appeared healthy except for slight pallor. There was no evidence of residual or recurrent tumor (Fig. 3 and 4). At that time the mother stated that the tumor had disappeared and reappeared beneath the scar several times during the past year. However, no return of the growth has been noted since the patient was seen on May 29, 1931. Roentgenograms of the chest made on Jan. 26, 1932, showed normal lung fields with no evidence of metastatic tumor.
Letters from the mother dated April 26, 1933, and Nov. 23, 1933, stated that the child was well with no evidence of tumor. At her last examination, Aug. 23, 1934, almost five years after operation, there was no sign of residual or recurrent growth. A letter of Jan. 23, 1936, seven years after operation, stated that the child was well and had no complaints except occasional itching in the region of the scar.

**Discussion**

The tumors usually seen in the new-born and infants are angiomas, lipomas, and fibromas, all of mesenchymal origin and all essentially benign in character. Distinctly rarer are the congenital, malignant, connective-tissue tumors for which thorough and radical therapy is necessary if a cure is to be obtained. The spontaneous disappearance of a congenital, recurring, connective-tissue tumor, in the absence of adequate surgical or radiation therapy, is most unusual. Just what term is to be applied to such a lesion is difficult to determine. It had none of the clinical or histologic characteristics of an infectious lesion or congenital anomaly and must, therefore, by exclusion, be considered a new growth of some unusual type. Although it infiltrated the overlying skin and surrounding muscles and fat, recurred and grew after surgical removal, and had all the ordinary histologic criteria of a malignant connective-tissue tumor, it is evident from the clinical course that it was not a fibrosarcoma; certainly not what is ordinarily meant by that term.

By whatever name the tumor is called, the interesting feature of spontaneous regression is not explained or altered. While it is true that certain types of angiomas in infants will heal spontaneously, probably from thrombosis, and that other relatively benign tumors may become necrotic and partially or completely slough away, the gradual disappearance of a subcutaneous connective-tissue tumor, whether benign or malignant, without gross infection
or softening, is quite outside common experience. Rohdenburg, in 1918, collected from the literature 302 cases of partial or complete spontaneous regression of malignant tumors. In some of these cases there were cures for varying periods of time, while in others the patient died soon after spontaneous local regression of the tumor. Heat, either as a result of infection or applied externally, and incomplete operations were about equally divided as the ascribed causes of regression. Actual failure to leave true neoplastic tissue after supposedly incomplete surgery and interference with the blood supply of residual tumor were considered the two most likely causes for the results obtained in the latter group. In the entire series of abstracted case reports, one is constantly impressed with the implicit confidence placed in the histologic diagnosis of the original lesion and in the clinical diagnosis of local recurrences made without histologic study. In many of the cases it is much easier to believe that error existed in one or both of these diagnoses than it is to subscribe to the totally unknown factor of spontaneous regression; in fact, progressive growth in the absence of adequate therapy is one of the criteria of a malignant tumor.

Mistakes in the diagnosis, prognosis, and treatment of malignant tumors vary in proportion to the training and experience of the individual physician and can never be completely eliminated. Valuable information can be gained from these mistakes, however, when they are studied without prejudice. Diagnosis, either by clinical or laboratory methods, can never be perfect, and the possibility of error must constantly be borne in mind. While it is true that correct histologic diagnoses may be made by specially trained pathologists in the great majority of cases, it is equally true that the nature of a given tumor has never been "proved" by such study. Pathologic diagnoses, like all others, are opinions based upon experience in the interpretation of certain fixed, stainable, visible tissue characteristics. In view, therefore, of the known sources of error in clinical and laboratory medicine, complete certainty as to the outcome in any case of tumor is extremely difficult or impossible to attain and prognosis at all times must be guarded.

Evaluation of any form of treatment is difficult and must be based upon a large series of cases studied impartially. In spite of this well known fact, isolated cases of malignant tumors supposedly cured by various chemical, serologic, and physical agents are continually being reported. The fallacy of drawing conclusions from these rare instances is obvious. In this case, it would have been easy and natural to have ascribed the cure to some form of treatment, whether chemical, physical, or surgical, if such had been used.

**Summary**

A spontaneous cure of a congenital, recurring, supposedly malignant connective-tissue tumor of the interscapular region of a six-months-old child is reported. The diagnosis was based upon the histologic study of two biopsy specimens in two different laboratories. The growth disappeared following the second incomplete operation, and the child has remained well for seven years.

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