

Neurilemoma of the Thyroid Gland *

WILLIAM E. DELANEY, M.D., KENNETH E. FRY, M.D.

From the Departments of Pathology and Surgery, Jefferson Medical College of Philadelphia, and the Clinical Laboratories, Jefferson Medical College Hospital, Philadelphia, Pennsylvania

BENIGN nonepithelial tumors of the thyroid gland are very rare lesions. Frantz records only four such neoplasms in the files of the Laboratory of Surgical Pathology of the College of Physicians and Surgeons of Columbia University.¹ Two were fibrous lesions of doubtful histogenesis, one was a cavernous hemangioma and one a neurilemoma. A leiomyoma has been reported in the thyroid gland.² Vascular tumors have been seen occasionally, including hemangioma,³ hemangiopericytoma,⁴ and lymphangioma.⁵ Recently, we encountered a neurilemoma of the thyroid gland, which is the basis of this report.

Case Report

Miss E. V., a 50-year-old white woman, was first seen on June 13, 1963 because of a painless swelling of the neck which she noticed one week previously. She also had irregular vaginal bleeding for two months. Menopause had occurred in 1959. A polyp of the uterine cervix had been excised in 1951. One brother had active pulmonary tuberculosis and the patient's mother had been operated upon for ovarian cancer.

On examination July 11, 1963, a nontender lump about 2.5 cm. in diameter was felt in the right lobe of the thyroid gland near the isthmus. The remainder of the gland appeared to be normal. There were no cafe-au-lait spots in the skin nor cutaneous tumors suggestive of neurofibromas. Chest x-ray films showed no abnormalities except bilateral anomalies of the first and second ribs. Hemoglobin and hematocrit determinations, leukocyte and differential counts, blood urea nitrogen, blood glucose, and urinalysis were normal. Serum protein bound iodine was 5.72

$\mu\text{Gm.}\%$ and the BMR was plus 30. The patient had no clinical evidence of toxicity so the BMR was considered an error.

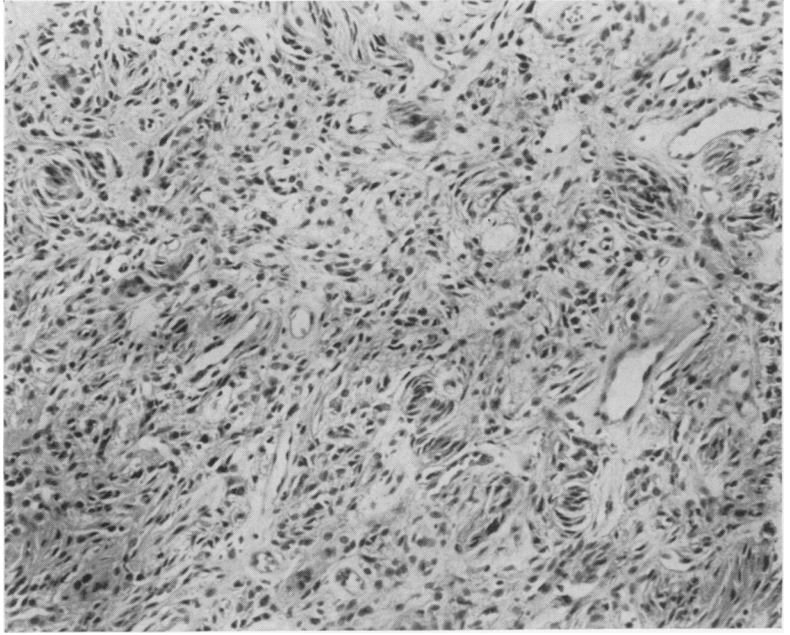
A right thyroid lobectomy and isthmectomy were performed. On July 18, 1963, uterine dilatation and curettage with excision of a submucous adenomyoma of the cervix (63-5030) were performed.

Pathologic Examination

The right lobe of the thyroid gland (63-4848) measured $4 \times 3 \times 2$ cm. and contained a mass in its inferior pole which on section was sharply circumscribed, pale tan and solid. At microscopic examination of a frozen section the lesion was declared benign. Paraffin sections showed the tumor to be composed of spindle cells without evident myofibrils and with a general haphazard arrangement. There was, however, a marked tendency for the spindle cells to be grouped side by side in a palisade manner and grow in sharply circumscribed nests resembling Wagner-Meissner corpuscles (Fig. 1). Focal areas of hemorrhage and edema were present and even some subcapsular microcysts were noted (Fig. 2), such as are seen in the Antoni B pattern of neurilemoma. Histiocytes and giant cells were also prominent and a fat stain showed many of these cells to contain neutral fats, a common finding in deep-seated neurilemmomas.⁶ Abundant capillaries were unevenly present throughout the tumor but the tumor cells did not uniformly circumscribe the blood vessels. Trichrome stain showed absence of collagen fibers except as thick sheaths around blood vessels, char-

* Submitted for publication October 29, 1963.

FIG. 1. Spindle cell character of lesion is accompanied by a growth pattern in nests resembling Wagner-Meissner corpuscles. A few of many vessels present are surrounded by an acellular mantle of dense collagenous tissue (H & E stain $\times 140$).



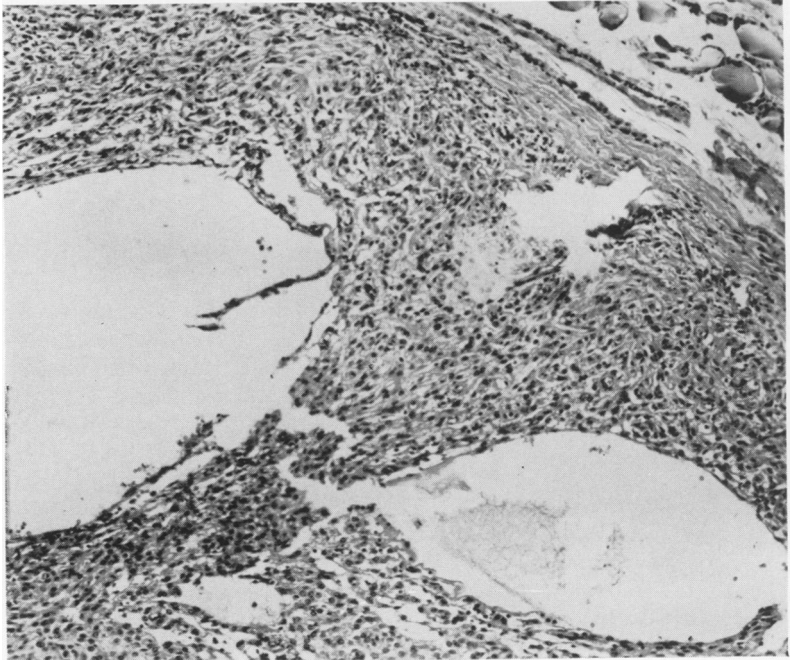
acteristic of neurilemmomas. Focal lymphoid infiltrate was seen, predominantly in a subcapsular location. The surrounding thyroid gland was compressed adjacent to the tumor but representative sections of the right lobe and isthmus showed no unusual features. The microscopic diagnosis of neuro-

lemoma was substantiated by Drs. Arthur Purdy Stout and Theodore Winship.

Summary

Benign nonepithelial tumors of the thyroid glands are rare and include lesions such as vascular tumors, smooth muscle

FIG. 2. Microcystic degeneration of the tumor is seen adjacent to the thin capsule, outside of which there is normal thyroid tissue (upper right) (H & E stain $\times 95$).



tumors and nerve tumors. The occurrence of a neurilemoma in the thyroid gland of a middle aged woman without clinical evidence of Von Recklinghausen's disease is reported.

References

1. Frantz, V. K., in Werner, S. C.: The Thyroid, New York, Paul B. Hoeber, Inc., 1962, p. 321.
2. Hendrick, J. W.: Leiomyoma of the Thyroid Gland; Report of a Case. *Surgery*, 42:597, 1957.
3. Jonas, W. and R. Goldstein: Congenital Hemangioma of the Thyroid Gland. *Harefuah*, 56:1, 1959.
4. Proks, C., Generalized Hemangiopericytoma of the Thyroid Gland (Report of a Case). *Neoplasma*, 8:219, 1961.
5. Schallock, G. and H. Ganz: A Case of Lymphangiomatosis of the Thyroid Gland. *Zbl. Allg. Path.*, 98:188, 1958.
6. Stout, A. P., Tumors of the Peripheral Nervous System—Section 11, Fascicle 6, Washington, D. C. Armed Forces Institute of Pathology, 1949, p. 16.

Books Received

Atlas of Anorectal Surgery. Lockwood, Richard A., M.D. McGraw-Hill Book Co., 1964, \$16.00.

The Science of Surgery. Storer, Pate, and Sherman. McGraw-Hill Book Co., Inc., 540 pages, 1964, \$17.95.

Textbook of Medical Surgical Nursing. Brunner, Lillian S., R.N., Emerson, Jr., Charles P., and Suddarth, Doris E., R.N. J. B. Lippincott Co., 1198 pages, 1964, \$11.00.

Intra-Ocular Lenses and Implants. Choyce, Peter. H. K. Lewis & Co. Ltd., London, W.C.I., 155 pages (66 colored).

A Practical Manual for the Treatment of Burns. Crews, Eli Rush, M.D., M.S. Charles C Thomas, 119 pages, 1964, \$6.75.

Accident Injuries of the Conjoined Femur. Kulowski, Jacob, M.D., F.A.C.S. Charles C Thomas, 294 pages, 1964, \$12.50.

Mathematical Elements of Lamellar Bone Remodelling. Frost, H. M., M.D. Charles C Thomas, 127 pages, 1964, \$6.75.

Gastroenterology. Bockus, Henry L., M.D. W. B. Saunders Co., 1964, 1241 pages.

Cancer of the Stomach. Remine, William H., M.D., M.S., F.A.C.S., et al. W. B. Saunders Co., 255 pages, 1964.

The Pathophysiology of Peptic Ulcer. Skoryna, Stanley C., M.D., M.Sc. J. B. Lippincott Co., 497 pages, 1964, \$20.00.

Orthopedic Surgery. Mercer, Sir Walter. Williams & Wilkins Co., 1031 pages, 1964, \$24.50.

Current Therapy. Conn, Howard F., et al. W. B. Saunders Co., 797 pages, 1964.

Correctable Renal Hypertension. Winter, Chester C. American Medical Book Publishers, 126 pages, 16 tables, \$17.50.

Atlas of Topographical and Applied Human Anatomy—Vol. 2—Thorax, Abdomen and Extremities. Ferner, Helmut, M.D., Translated from German by Dr. Harry Monsen. With 378 illustrations most in color, W. B. Saunders Co., 421 pages, 1964, \$37.50.

Synopsis of Surgery. Cotton, L. T., M.A., M.Ch (Oxon), F.R.C.S. Williams & Wilkins Co., 778 pages, 1963.

A Follow-Up Study of Heart Wounds in World War II. Walker, A. Earl, M.D., and Gablon, Seymour, M.A. 202 pages, 1964.

Tumors of Infancy and Childhood. Michael, Paul, M.D. J. B. Lippincott Co., 461 pages, 1964, \$18.50.

(Continued on page 1020)