Primary Neurilemoma of the Thyroid Gland: Report of a Case

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Abstract: Neurilemoma, like other non-epithelial tumors, seldom occurs in the thyroid gland. A 57-year-old man was first referred to our hospital with an asymptomatic anterior neck tumor. A solid tumor was detected in the right lobe of the thyroid and an enucleation of the thyroid tumor was performed. The tumor was 35 x 33 x 33mm in size, and diagnosed as Antoni A type neurilemoma. We were only able to find seven previously reported detailed cases of primary neurilemoma of the thyroid gland. A review of these cases, however, revealed that neurilemoma tends to develop in the right lobe of the thyroid gland. An operation is thus considered necessary and an enucleation of the tumor is appropriate.

Key Words: neurilemoma, thyroid gland

Introduction

Non-epithelial tumors of the thyroid gland are very rare, and, as a result, have not frequently been reported. We experienced one case of neurilemoma of the thyroid gland, and herein describe the case, as well as review previously reported cases.

Case Report

A 57-year-old man was first referred to our hospital in October 1989, with a firm and painless mass palpable in the neck. Physical examination revealed a smooth, well defined, and movable tumor in the right side of his anterior neck. The regional lymph nodes were not palpable. There was no skin pigmentation and no subcutaneous tumors that were suspected of any disease related to the peripheral nerves. A radiologic study showed a tracheal deviation slightly to the left (Fig. 1). No abnormal calcification was found in the neck. Ultrasonography showed a well defined, mostly solid, and partially cystic thyroid tumor measuring 36 x 35 mm, which was located in the middle to the inferior part of the right thyroid lobe (Fig. 2). 99m-Technetium pertechnetate (99m-Tc) thyroid scintigraphy showed a cold area in the right lobe (Fig. 3). The serum T₃ (triiodothyronine), T₄ (thyroxine), and TSH (thyroid-stimulating hormone) were all within normal limits. Although a benign tumor was suspected, its size still suggested the possibility of malignancy.

The patient underwent an operation on November 11, 1989. At operation, the tumor was found in the middle to the inferior part of the right lobe, and was completely covered with a smooth sheath of the thyroid gland. For its benign macroscopic appearance, an enucleation of the tumor was performed.

The tumor was a thickly encapsulated solid mass, and was 35 x 33 x 33 mm in size. The cut surface of the tumor revealed a gray tissue, and several small cystic lesions were evident. Microscopic sections revealed a structure of interlacing bundles of small spindle cells showing a “palisading pattern” (Fig. 4a). The tumor cells were diffusely immunostained with anti-S-100 protein antibody (Fig. 4b). These findings were compatible with the Antoni A type neurilemoma.

The patient was discharged one week after the operation. He is presently doing well with no evidence of recurrence when examined at follow-up.

Discussion

Neurilemoma, like other non-epithelial tumors, developing in the thyroid gland is very rare. As far as we are aware, Frantz noted the first case of a neurilemoma of
Fig. 1. Roentgenogram of the cervix showing a slight tracheal deviation to the left

Fig. 2. Ultrasonogram of the thyroid gland showing a solid thyroid tumor with some cystic change

Fig. 3. 99m-Technetium pertechnetate thyroid scintigram showing a cold area in the right lobe of the thyroid