Notas cortas

Extravascular papillary endothelial hyperplasia in thyroid

S. Valérdiz-Casasola, J. Santos* and P. Ortega

*Departments of Pathology and *Otorinolaryngology, Hospital del Bierzo, Fuentenuevas (León).*

INTRODUCTION

Although several studies have been conducted on malignant vascular thyroid tumors (1-3), benign vascular proliferations have never been extensively investigated. Histological endothelial hyperplasia reactive to hemorrhage and necrosis has been described (4), but the pattern observed in Masson's intravascular papillary endothelial proliferation has only been seen in isolated cases (5).

The aim of this study was to describe the morphological features and clinical characteristics of thyroid papillary endothelial proliferation.

CASE REPORT

A 64-year-old female who had had endemic goiter for 15 years and experienced a recent increase in volume of the right thyroid lobe was studied. A cold nodule in the right lobule of the thyroid was identified by nuclear scan. Fine-needle aspiration (FNA) was unconclusive, showing abundant hemorrhaging and absence of colloid or folicullar cells. Partial thyroidectomy was performed.

Grossly, the nodule had a diameter of 6 cm and once cut, it corresponded to a cystic nodule with hemorrhage and necrosis.

Microscopically, the tumor was composed of intercommunicating vascular spaces lined by layers of endothelial cells containing red blood cells and pseudopapillary structures with hyalinized collagenous cores. Swollen elongated cells, which were strongly positive for vimentine, F-VIIIAg and CD34 covered the fibrous cores (Fig. 1). Significant pleomorphism and mitotic figures were absent.

Figure 1. Fibrous stalks are covered by endothelial cells, which are strongly immunoreactive for CD34 (original magnification ×100).

DISCUSSION

Sapino *et al.* (4) described 11 cases of histological endothelial hyperplasia reactive to hemorrhage and necrosis and the histological pattern of Masson's tumor (5) was seen in three cases. Papillary endothelial hyperplasia was described by Masson as a benign intravascular tumor. Extravascular tumors occur as a result of the organization of a hematoma. In long-standing adenomatous goiter, hemorrhage and regressive changes are common findings (6) and rarely does an individual nodule undergoe complete hemorrhagic necrosis. This has been linked to ischemic episodes, however in recent studies FNA biopsy has been regarded to be an additional cause (7).

The cytological criteria for the diagnosis of thyroid nodule are well established, and some textbooks and reviews also report on the identification of regressive changes and evidence of previous hemorrhage in goitrous nodules (8). No mention was found of endothelial hyperplasia as an additional change detectable in long-standing nodular goiter. In our patient, cytological smears showed only abundant hemorrhage.

Histologically, in papillary endothelial hyperplasia cellular pleomorphism and occasional mitotic figures may occur, but usually these features are much less pronounced than in hemangiosarcoma. The histological features of reactive endothelial hyperplasia may mimic malignant hemangioendothelioma of the thyroid, which may lead to unnecessary radical surgery or chemotherapy. However, some authors consider that malignant hemangioendothelioma to represent neoplastic transformation of preexisting intranodular hemorrhage in long-standing goiter (9).

REFERENCES

1. Eckert F, Schmid U, Gloor F et al. *Evidence of vascular differentiation in anaplastic tumors of the thyroid –an immunohistological study.* Virchows Arch A 1986; 410: 203-215.
2. Totsch M, Dobler G, Feicthinger H, Sandbichler P, Ladurner D, Schmid KW. *Malignant hemangioendothelioma of the thyroid.* Am J Surg Pathol 1990; 14: 69-74.
3. Lamovec J, Zider A, Zidanik B. *Epithelioid angiosarcoma of the thyroid gland.* Arch Pathol Lab Med 1994; 118: 642-646.
4. Sapino A, Papott M, Macri L, Satolli MA. Bussolati G. *Intranodular reactive endothelial hyperplasia in adenomatous goitre.* Histopathology 1995: 26: 457-462.
5. Clearkin KP, Enzinger FM. *Intravascular papillary endothelial hyperplasia.* Arch Pathol Lab Med 1976: 100: 441-444.
6. LiVolsi VA. *Surgical pathology of the thyroid.* WB Saunders, Philadelphia 1990; 171: 285-292.
7. Jayaram G, Aggarwal B. *Infarction of the thyroid nodule: A rare complication following fine needle aspiration.* Acta Cytol 1989; 33: 940-941.
8. Palestini N, Papotti M, Sapino A et al. *Fine-needle aspiration biopsy of the thyroid.* Int J Surg Pathol 1994; 1: 171-176.
9. Ljungberg O. *Biopsy pathology of the thyroid and parathyroid.* Chapman & Hall Medical, London 1992: 75-102.