CASE REPORT

Adrenal Schwannoma. Report of two cases

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Adrenal tumours are frequently incidental discoveries, and their therapy is a subject of controversial discussions. Herein we describe two cases of adrenal schwannoma discovered during autopsy. The accidental observation of two benign schwannomas of the adrenal gland on asymptomatic patients led to the hypothesis that the real frequency of this type of lesion was underestimated. Furthermore, the adrenal origin of the superior retro-peritoneum schwannomas represents a diagnostic hypothesis to be considered when the original structure of the neoplasia can’t be established.

key words: schwannoma, adrenal gland, asymptomatic

It is commonly known that schwannomas of retroperitoneal tissues are rare. Recently, Terada and Inatuchi [5] reported that adrenal and juxtadrenal schwannomas are particularly very rare. In this study, we will focus on retroperitoneal schwannomas. We will describe two cases of schwannoma located just into the adrenal glands. Schwannoma is a benign, which is usually an encapsulated nerve sheath tumour composed of cells with the immunophenotype of Schwann cells. Typically, schwannomas affect the cutaneous nerves of the head and neck, upper extremities, lower extremities and trunk. They predominantly occur in females between the 2nd and 5th decade of life. Visceral schwannomas are very rare and occasionally may represent incidental reports. According to literature, visceral schwannomas are described in the heart, kidney, and lung [1]. The retroperitoneal space is another location of schwannomas that among all retroperitoneal tumours amount to about 1% to 10%, depending on bibliographic references. Estimation of the real incidence of benign schwannomas is affected by case studies, which include these tumours and neurofibromas in the same pathologic entity. Except in cases of von Reclinghausen’s disease, the adrenal localisation of schwannoma is particularly rare. Herein we describe two cases of adrenal schwannoma discovered during autopsy.

The first case was an 89-year-old man who died from pulmonary embolism. Microscopic examination of the right adrenal gland showed a 1 × 0.4 cm oval-shaped white-yellow firm mass. Histologically, the tumour consisted of spindle cells widely separated by mature adipose tissue. The tumour was diagnosed as schwannoma of the adrenal gland.
Figure 1. Case 1: Lesion consisting of spindle cells widely separated by mature adipose tissue arising within a nerve (eccentric growth) (A); Immunostains for S-100 (B, C); Case 2. Microphotograph of the tumour showing a fascicular arrangement of strand spindle cells with indistinct cytoplasmic borders and without nuclear atypia (D, E); Immunostains for S-100 (F).
The second case was a 67-year-old man who died of a massive infarct of myocardium. Microscopic examination of the adrenal gland revealed a small (0.6 cm in diameter) non-capsulated nodular mass that showed a fascicular arrangement of strand spindle cells (Fig. 1D, E) with indistinct cytoplasmic borders and without nuclear atypia. In this case, immunohistochemical examinations for S-100, S-100β (Fig. 1F) and Vimentin were positive, but there were negative for Actin and CD34. Even in this case schwannoma was diagnosed. A group of non-epithelial tumours with spindle cell features of the adrenal gland can have histopathologic resemblance to adrenal schwannoma. In particular, leiomyoma and solitary fibrous tumour have to be differentiated from it.

In our cases, both tumours showed immunohistochemical reactivity for S-100, S-100β and vimentin ruling out the presence of leiomyoma and solitary fibrous tumour. The reason why schwannomas have their origin in juxta-adrenal tissue is probably because they all have the same descent, i.e. the neural crest in the embryonic development and phylogenetic evolution of Schwann cells and the adrenal gland medulla. Quite often these cases are described generally as retroperitoneal, but they rarely refer to the original structure of the neoplasia [2]. Sharma et. al. [4] have described a retroperitoneal schwannoma simulating a surrenal lesion, suggesting a juxta-surrenal origin of the lesion. Pittash et. al. [3] have reported a case of schwannoma, which is present as an adrenal tumour. All these cases were diagnosed on symptomatic patients, but the literature has not reported any study on post-mortem incidence of adrenal schwannomas.

The accidental observation of two benign schwannomas of the adrenal gland on asymptomatic patients led to the hypothesis that the real frequency of this type of lesion was underestimated. Furthermore, the adrenal origin of the superior retro-peritoneum schwannomas represents a diagnostic hypothesis to be considered when the original structure of the neoplasia can’t be established.

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