CASE REPORT – OPEN ACCESS

International Journal of Surgery Case Reports 11 (2015) 40–43

Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

A rare case of extracranial meningioma in parapharyngeal space presented as a neck mass

Nader Albsoul[a], Badi Rawashdeh[b,*], Ahmad Albsoul[a], Mohammad Abdullah[a], Simin Golestani[b], Aasem Rawshdeh[a], Mona Mohammad[a], Mohammad Alzoubi[a]

[a] Jordan University Hospital, Department of General Surgery, Amman, Jordan
[b] University of Arizona Medical Center, Department of General Surgery, United States

ARTICLE INFO

Article history:
Received 3 January 2015
Received in revised form 19 March 2015
Accepted 3 April 2015
Available online 13 April 2015

Keywords:
Meningioma
Parapharyngeal space
Neck mass

ABSTRACT

BACKGROUND: Meningiomas are the most common intracranial tumor, but rarely, they can develop extracranially, usually in the neck. There are very few cases of parapharyngeal meningioma reported in literature and little is known about their biological behavior and operative management. We present a patient with a primary parapharyngeal meningioma that presented as an anterior neck mass.
CASE PRESENTATION: The patient is a 55-year-old female who presented with neck mass. A CT scan and MRI revealed a large, well defined, mildly enhancing soft tissue mass located in the right carotid sheath extended from the level of the thyroid gland into the skull base jugular foramen superiorly. Cervical exploration with partial excision of the mass was performed. Histological examination revealed meningiothelial cells with intranuclear inclusions, arranged in a syncytial pattern. Mutiple psamoma bodies these findings are consistent with the diagnosis of meningioma.
CONCLUSION: Extracranial meningiomas are quite rare. The diagnosis of these types of tumors is challenging due to the non specific nature of the symptoms. The anatomic complexity of the region of parapharyngeal space also makes their detection difficult. Imaging modalities can aid in the diagnosis, but pathological examinations are essential in confirming a definite diagnosis.

1. Introduction

Meningiomas are the most common non- glial tumors of the brain and spine which constitute about 15% of all intracranial and 25% of all spinal tumors [1]. There are two forms of meningiomas, a more common intracranial and the rare extracranial tumor. Women make up the greater percentage of patients with intracranial meningiomas, whereas male patients are more likely to have extracranial meningiomas [2]. These two forms of meningiomas are histologically quite similar, and distinguishing them based on immunohistochemistry is not possible.

Meningiomas originate from pia-arachnoid cells, particularly those of the arachnoid villi, and are classically attached to the dura. Meningiomas exhibit diverse clinical manifestations and histological features such as psammoma bodies, abundant cytoplasm and vesiculated nuclei [3]. Meningiomas have been classified by the WHO into three different malignancy grades: benign (grade I), atypical (grade II) and anaplastic (grade III). Regardless of the grade the recommended treatment is complete surgical excision if possible, followed by oncological support if necessary.

Due to the rare nature of extracranial meningiomas and the lack of localized and specific symptoms the diagnosis of these tumors can prove to be challenging. The presence in the neck as a parapharyngeal space mass is quite rare [4]. We present a rare case of parapharyngeal meningioma in a 55 year old female patient who presented with a painless right neck mass.

2. Case report

A 55 year old woman presented with a five years history of painless neck mass. The patient noticed a gradual increase in its size over the past year. She denied any shortness of breath, dysphagia, hoarseness or hearing problems at any time. The patient did not have any neurological or constitutional symptoms.

On clinical examination the mass (Fig. 1) was found to be firm, non tender, fixed and non pulsatile, without being attached to the overlying skin. The patient did not have any skin changes, bruits, palpable lymph nodes or associated neck masses. Upon intra-oral

* Corresponding author at: The University of Arizona Medical Center, Department of General Surgery, 1501 N. Campbell Avenue, P.O. Box 245071, Tucson, AZ 85724-5071, United States. Tel.: +1 520 626 7951; fax: +1 520 626 4042.
E-mail address: brawashdeh@surgery.arizona.edu (B. Rawashdeh).

http://dx.doi.org/10.1016/j.ijscr.2015.04.012

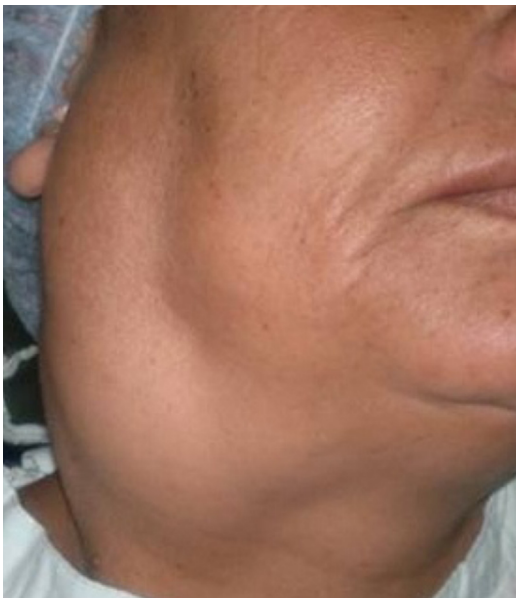

Fig. 1. Right side neck mass measuring about 15 cm in diameter.

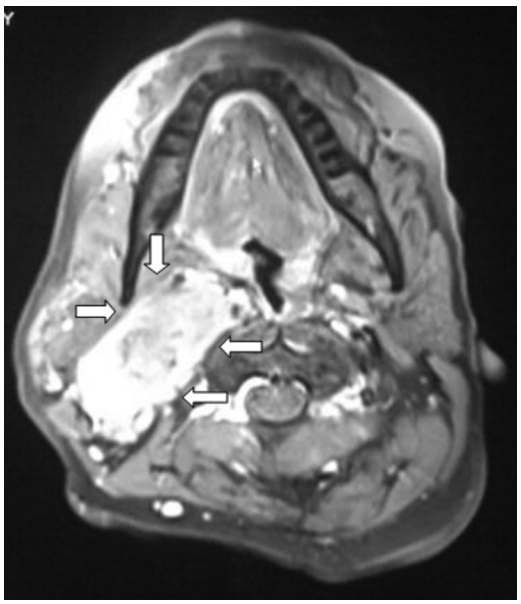

Fig. 3. MR imaging demonstrating a soft tissue mass compressing adjacent structures.

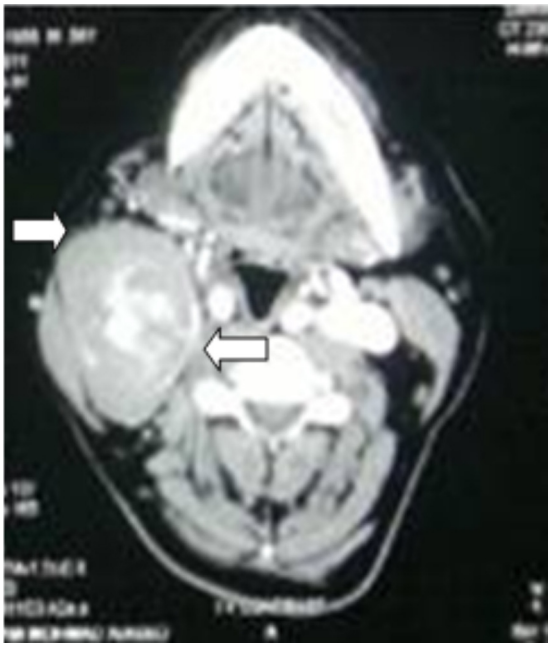

Fig. 2. Axial CT imaging demonstrating large well defined mildly enhancing soft tissue mass.

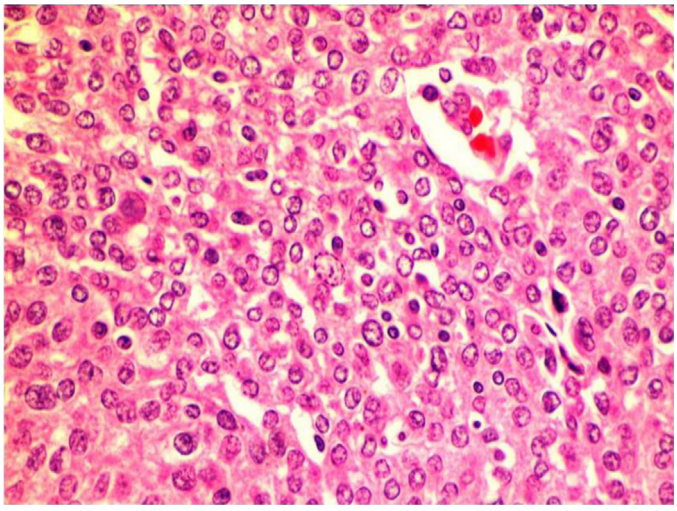

Fig. 4. Histological features of extracranial meningioma demonstrating meningothelial cells with intranuclear inclusion and multiple psammoma bodies.

examination the tonsils were found to be regular sized and centered, however the lateral pharyngeal wall was pushed medially.

A CT scan (Fig. 2) and an MRI (Fig 3.) were performed, which demonstrated the presence of a large, well defined, mildly enhancing soft tissue mass measuring about $8.5 \times 6 \times 5$ cm located in the right carotid sheath. The mass extended from the level of the thyroid gland into the skull base jugular foramen superiorly, and displayed dense peripheral and central calcification. The surrounding structures were compressed by the mass, and a few small adjacent lymph nodes were seen.

Fine needle aspiration (FNA) of the mass showed sheets of cells with frequent microfollicle formation. The surrounding colloid material displayed grooving as well as nuclear pseudoinclusions and scattered psammoma bodies. The pathologist could not make a clear diagnosis on FNA only, and asked for a tissue diagnosis.

Although the patient had no symptoms, the mass was obvious on her right upper neck, and was disfiguring, the patient underwent right cervical exploration for excisional biopsy and because of the encasement of the right internal jugular vein she underwent partial excision of the mass.. Histological examination (Fig 4) revealed a tumor composed of bland looking meningiothelial cells with intranuclear inclusions, arranged in a syncytial pattern. Mutiple psamoma bodies were also observed, the mass presented with a mitotic index less than 3/10HPF.

No Radiotherapy has been given to the patient, and after 8 months of follow up, the patient had no new complaints and the mass was almost the same size.

3. Discussion

Meningiomas can exist as intracranial or extracranial brain tumors. Despite their similarities, these two forms of tumors have very different characteristics and presentations. Intracranial brain tumors are more common, accounting for 30% of all brain tumors.