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FAR-LATERAL APPROACH FOR FORAMEN MAGNUM MENINGIOMA: AN ANATOMICAL STUDY WITH SPECIAL REFERENCE TO BULBOPONTINE JUNCTION

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ABSTRACT

lesions of the FM can manifest themselves from simple neck pain to the picture of quadriplegia with respiratory disorders (3% in the French series) of spinal cord compression with a U or Z pattern explained by the decussation level of the pyramidal fasciculus. Involvement of the cranial nerves from XI to XII and cerebellar involvement are rare; other much rarer signs have been described, facial neuralgia, cervico-brachial neuralgia, syringomyelic syndrome, Claude Bernard Horner.

The objective of this work is to describe the diagnostic and therapeutic aspects of this localization.

Keyword: Foramen magnum. Meningiomas. Neuromas. Vertebral artery.Far side track

1. INTRODUCTION

Tumors of the foramen magnum are expansive intra or extradural processes located in a very anatomically complex region. The management of these tumors constitutes a neurosurgical challenge because of their central location but especially their close relationships with vital vasculonervous structures. The objective of this work is to describe the diagnostic and therapeutic aspects of this localization.

2. OBSERVATION:

Patient aged 59, presenting neck pain; heaviness of the left upper limb for 04 months; the clinical examination reveals a Monoparesis of the left upper limb 3/5 with vivid ROT.

Fig 01: Cerebrospinal MRI, sagittal section

MRI of the spinal cord showed a nodular intraductal extramedullary tumor process located at the level of left anterolateral C1, measuring 16 × 14 × 25 mm compressing the bulbo-medullary junction.

The surgical goal, regardless of tumor size, should be to preserve and improve neurological function through radical resection. This resection should be attempted with zeal from the initial operation, which is the best time to

To achieve cure, however, the surgeon may sometimes be forced to accept a subtotal resection when the tumor is strongly adherent to vital neurovascular structures.

There are several approaches to FM:1- the oral trance route 2- the posterior median route 3- the lateral Far.The choice of the approach is decided according to the nature and location of the tumor. In our case we used the Far lateral approach of BERNARD GEORGES which offers several advantages: the direct angle of attack on the tumor and the low insertion and early exposure of the various important vascular-nervous relationships.

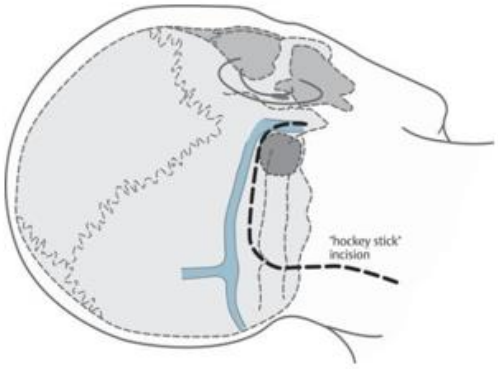

Fig 02: the lateral Far approche

Figure 03:intraoperative appearance

The pathological examination was in favor of a meningothelial meningioma. Clinical and radiological controls did not show any tumor residue or recurrence after 06 months.

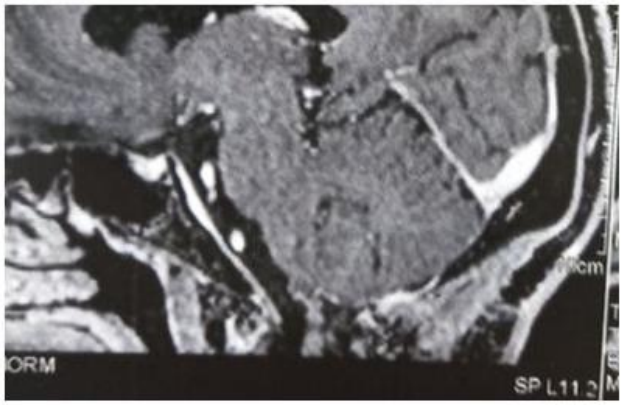

Fig 04: Control MRI after 3 months

3. DISCUSSION

lesions of the FM can manifest themselves from simple neck pain to the picture of quadriplegia with respiratory problems (3% in the French series) of spinal cord compression with a U or Z pattern explained by the decussation level of the pyramidal fasciculus. Involvement of the cranial nerves from XI to XII and cerebellar involvement are rare; other much rarer signs have been described, facial neuralgia, cervico-brachial neuralgia, syringomyelic syndrome, Claude Bernard Horner. MRI is generally sufficient for the study of non-osseous tumors with angiographic sequences in sagittal, coronal and axial sections with gadolinium injection. CT scanning is of interest in bone TRs. Angiography is rarely performed except to assess the vascularization of the TR, and its relationships with the AV as well as its branches (PICA), or with a view to prior embolization; the external carotid is interesting to know (occipital, ascending pharyngeal arteries). There are several approaches to FM: - the oral trance route. (VTO). - the posterior median route. (VMP). - the lateral pathways: - posterolateral (VPL). - anterolateral (VAL). TUMORS OF THE FORAMEN MAGNUM 28 Fig.2: Pre-operative MRI C2 neuroma Fig.3: Post-operative MRI Total excision Other routes have been described but less adequate: trans-cervical trans-clival, trans-basal , transpetrous-trans-sphenoidal. The choice of approach is decided according to the nature and location of the TR, whether intra and/or extradural. The histological types are dominated by meningiomas and neuromas:

4. CONCLUSION

FM tumors have long been considered difficult lesions both in terms of diagnosis and management, however, the availability of MRI and the description of new surgical approaches have made the excision of these lesions easier and safer.

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