ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

www.surgicalneurologyint.com

Surgical Neurology International

Editor-in-Chief: Nancy E. Epstein, MD, Clinical Professor of Neurological Surgery, School of Medicine, State U. of NY at Stony Brook.

SNI: Skull Base

Editor
Mitsutoshi Nakada, MD
Kanazawa University, Ishikawa, Japan

SNI
Open Access

Video Abstract

Anterior petrosal approach for petroclival solitary plasmacytoma

José Orlando de Melo Junior[1], Luiz Antônio da Silva Lavradas Junior[2], José Alberto Landeiro[3]

[1]Department of Neurosurgery, Paulo Niemeyer State Brain Institute, Rio de Janeiro, [2]Department of Neurosurgery, São José Hospital, Criciúma, [3]Department of Neurosurgery, Antônio Pedro University Hospital, Fluminense Federal University, Niterói, Brazil.

E-mail: *José Orlando de Melo Junior - jomjunior@gmail.com; Luiz Antônio da Silva Lavradas Junior - luizlavradas@hotmail.com; José Alberto Landeiro - jalandeiro@gmail.com

***Corresponding author:**
José Orlando de Melo Junior, Department of Neurosurgery, Paulo Niemeyer State Brain Institute, Rio de Janeiro, Brazil.

jomjunior@gmail.com

Received : 07 April 2022
Accepted : 27 April 2022
Published : 13 May 2022

DOI
10.25259/SNI_325_2022

Videos available on:
https://doi.org/10.25259/SNI_325_2022

Quick Response Code:

ABSTRACT

Background: Primary solitary plasmacytoma (PSP) of the skull base is a rare localized monoclonal plasma cell dyscrasia with normal or low plasma cell infiltration. Differentiating from other skull base tumors based on radiologic findings is difficult due to nonspecific features. PSP has a better prognosis after surgical resection and adjuvant radiotherapy, unless the tumor progresses to multiple myeloma (MM). Nonetheless, 50–60% progress to MM within a median time of 2 years. Gross total resection (GTR) for PSP is controversial for improving overall survival. However, if the lesion is easily accessible, for example, nonskull base lesion, GTR is still advocated.

Case Description: A 67-year-old male patient presented with right occipital neuralgia and diplopia in the last year. Neurological examination revealed mild abducens paresis on the right side. Brain MRI scan showed a large petroclival bony extradural mass lesion on the right side, with homogeneous enhancement, extending from the dorsum sellae to the ipsilateral occipital condyle and involving the petrous carotid artery. Brain CT scan revealed an osteolytic lesion without intratumoral calcifications, sclerotic border, or periosteal reaction. Anterior petrosal approach was performed and GTR was achieved. The patient had good postoperative outcome and improvement of symptoms. Postoperative MRI revealed GTR. Total body imaging work-up and immunohistochemistry confirmed PSP.

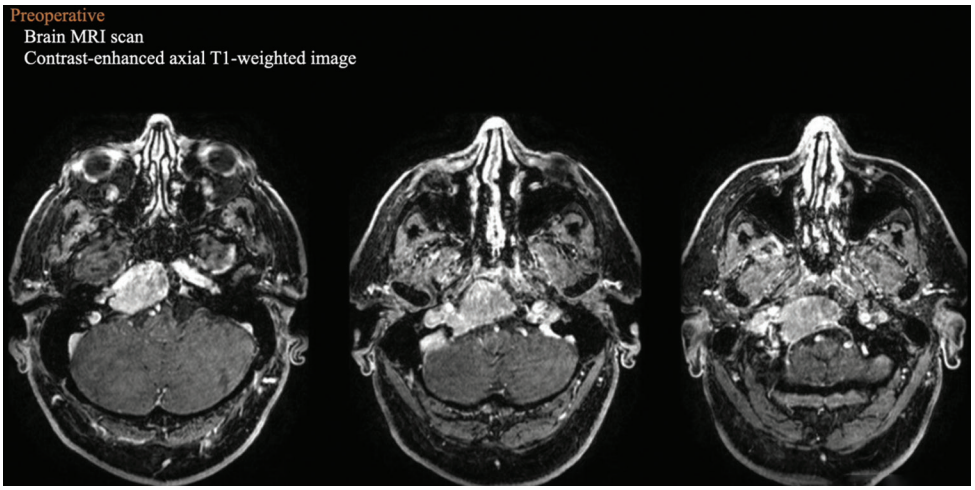
Conclusion: Although the extent of resection in the outcome is controversial, maximal safe resection of skull base PSP should be considered to improve symptoms and quality of life.

Keywords: Anterior petrosal approach, Petroclival, Skull base, Solitary plasmacytoma

[Video 1]-Available on:
www.surgicalneurologyint.com

Annotations[1-6]

1) 00:00 – Introduction
2) 00:46 – Case presentation
3) 01:02 – Preoperative imaging
4) 01:53 – Anterior petrosal approach, landmarks in a cadaver model
5) 03:10 – Anterior petrosal approach, surgical steps



Video 1: Contrast-enhanced axial T1-weighted MRI showed a huge extradural mass lesion at the skull base, centered in the right petroclival region, exhibiting homogeneous enhancement. The tumor extended from the dorsum sellae to the ipsilateral occipital condyle, involving the ipsilateral petrous apex, petrous carotid artery, Meckel's cave and sphenoid sinus, in close relation to the jugular foramen and foramen magnum

6) 04:03 – Surgical video
7) 06:23 – Postoperative imaging
8) 06:29 – Outcome and conclusion.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Knobel D, Zhouhair A, Tsang RW, Poortmans P, Belkacémi Y, Bolla M, *et al*. Prognostic factors in solitary plasmacytoma of the bone: A multicenter rare cancer network study. BMC Cancer 2006;6:118.
2. Ma XJ, Li D, Wang L, Hao SY, Zhang LW, Zhang JT, *et al*. Clinical features, radiological profiles, and surgical outcomes of primary intracranial solitary plasmacytomas: A report of 17 cases and a pooled analysis of individual patient data. J Neurooncol 2019;142:263-72.
3. Na'ara S, Amit M, Gil Z, Billan S. Plasmacytoma of the skull base: A meta-analysis. J Neurol Surg B Skull Base 2016;77:61.
4. Ozsahin M, Tsang RW, Poortmans P, Belkacémi Y, Bolla M, Dinçbas FO, *et al*. Outcomes and patterns of failure in solitary plasmacytoma: A multicenter rare cancer network study of 258 patients. Int J Radiat Oncol Biol Phys 2006;64:210-7.
5. Schwartz TH, Rhiew R, Isaacson SR, Orazi A, Bruce JN. Association between intracranial plasmacytoma and multiple myeloma: Clinicopathological outcome study. Neurosurgery 2001;49:1039-45.
6. Soutar R, Lucraft H, Jackson G, Reece A, Bird J, Low E, *et al*. Guidelines on the diagnosis and management of solitary plasmacytoma of bone and solitary extramedullary plasmacytoma. Br J Haematol 2004;124:717-26.

How to cite this article: de Melo Junior JO, Lavradas Junior LD, Landeiro JA. Anterior petrosal approach for petroclival solitary plasmacytoma. Surg Neurol Int 2022;13:201.