Letter to the Editor

Mysterious meningioma: Surviving the odds

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Received: 25 December 12   Accepted: 04 January 13   Published: 27 February 13

Dear Editor,

Clinical and imaging markers are a part and parcel of decision-making in neurosurgery, often prompting the surgeon to intervene before doom strikes. But, nature and its mechanisms, best not understood, do play a vital role. We herein present a case, which survived the odds, including the odds by neurosurgeon to teach us a lesson on the mystery of nature.

A 62-year-old female presented with history of seizures of 8 years duration and was worked up as a case of left temporo-parietal meningioma 7 years back and was kept on phenytoin. She also had a history of left hemicranial headache, which was partially relievable with medications. She presented to our outpatient department with history of increased seizure frequency and severity of headache with associated occasional vomitings. There was no other significant history. On examination, the patient was remarkably preserved with no focal sensory or motor deficits.

She presented with previous imaging done 7 years ago, which to our astonishment was showing a well-defined 4 × 5 × 5 cm extra-axial lesion in the left temporo-parietal region with squashing of ipsilateral ventricle and significant mass effect and midline shift to the opposite side and considerable peri-lesional edema [Figure 1]. The patient was advised surgery in 2005 but was deferred for lack of consent for surgical intervention. There was no history of any steroid intake. A repeat CT scan of the brain showed the lesion had significant increase in size, which was isodense on plain CT and enhancing homogenously on contrast and significant peri-lesional edema with mass effect and midline shift towards right side [Figures 2 and 3].

The presented case assumes significance in many contexts. First, with the first scan done 7 years ago, none could have contemplated a conservative approach, and an emergency surgical excision of the lesion would have been the top priority on any attending surgeon’s mind. Second, despite any surgical intervention for such a long duration of 7 years, the patient remained well-preserved with no focal deficits or any deterioration, except for a recent

This article may be cited as:
Bramhaprasad V, Rajesh A, Kumar A. Mysterious meningioma: Surviving the odds. Surg Neurol Int 2013;4:29.

Available FREE in open access from: http://www.surgicalneurologyint.com/text.asp?2013/4/1/29/107907

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Figure 1: Axial CT scan brain contrast study showing a well-defined 4 × 5 × 5 cm lesion in the left temporo-parietal region, uniformly enhancing on contrast administration with significant mass effect and midline shift (imaging done in 2005)
increase in seizure frequency. Third, this underscores the paramount role of neuronal plasticity of the brain and other accommodative mechanisms responsible for the preserved neurological status over such a long duration. One also needs to take into account that since it being a meningioma imageologically, the expected rate of growth is around 1-2 mm per year. But, since a significant peri-lesional edema was already present in the very first image, the possibility of a malignant meningioma could not be ruled out.

A review of literature was done in this context, and it was observed in a study on outcomes of untreated meningiomas by Rubin, et al. that the incidence of rate of growth was low in elderly-aged group and that the presence of associated calcifications in the lesion portended a favorable prognosis. In another study by Sughrue, et al., it was observed that incidentally discovered meningiomas less than or equal to 2.5 cm in size do not proceed to cause symptoms during subsequent 5 years of their discovery. According to the study on natural history on intracranial meningiomas by Ova, et al., patients younger than 60 years of age with imaging demonstrating hyperintensity on T2WI with edema and size greater than 25 mm and lack of associated calcifications need to be followed up more closely. In another significant study by Desmurget, et al., it was observed that the temporal pattern of insult inflicted on the brain was significant in the process of recruitment of remote brain areas in ipsilateral and contralateral hemispheres and that the functional recovery and adaptment is significantly better in slow-growing lesions. In this case, the age of the patient being above 60 years could also have a contributory role in accommodating such a large lesion along with a reasonable anti-epileptic regimen causing no acute decompensation.

This case epitomizes the role of plasticity of the human brain and unquestionably redefines the role of emergent surgical intervention in cases with large malignant meningiomas with significant mass effect and midline shifts.

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