

Case Series

# Navigating the complexity of intracranial solitary fibrous tumors: A single-center experience

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## ABSTRACT

Solitary fibrous tumor (SFT) is a very uncommon central nervous system (CNS) neoplasm and accounts for less than 1% of primary CNS tumors. After the World Health Organization's reclassification in 2021, SFT is a rare novel entity. Since SFT is a slow-growing, vascular, and aggressive tumor, it has a likelihood of local recurrence as well as distant metastasis. Surgery remains the main treatment modality, whereas postoperative radiation therapy (PORT) benefits in local control. In this case series, we analyzed the data on intracranial SFT retrospectively among patients who had presented to us in 2024 and underwent surgery in the same year. We reviewed the primary surgery that was done, the extent of resection, clinical presentation, radiological findings, tumor size, post-operative radiotherapy, and a brief follow-up. In this study, 4 cases of intracranial SFT have been discussed along with a review of the literature. Although surgery remains the main treatment domain, PORT is a part of adjuvant treatment in all grades of SFT for controlling local recurrence. Because of the rarity of the disease, most of the previous studies are single-center, and the role of post-operative radiotherapy is in controlling local recurrence; however, conflicting.

**Keywords:** Intracranial SFT, Local recurrence, Neurosurgery, Post-operative radiation therapy, Primary CNS tumors

## INTRODUCTION

Solitary fibrous tumor (SFT) is an uncommon neoplasm and accounts for 0.4% of primary tumors of the central nervous system (CNS).<sup>[1]</sup> Stout and Murray described the term Hemangiopericytoma (HPC) as a neoplasm arising from perivascular cells.<sup>[2]</sup> It was known as HPC before the 2016 update of the World Health Organization (WHO). After the WHO classification of CNS tumors in 2021, the nomenclature of SFT/HPC was eventually resolved, and the name HPC was disregarded completely, with SFT as the sole entity left.<sup>[3]</sup> The updated WHO classification differentiates SFT into three grades, with higher grades subject to lower overall and progression-free survival.<sup>[4]</sup>

SFTs have detected NAB2 and STAT6 fusion genes, and the fusion gene is regarded to be a specific marker. SFT is

usually an asymptomatic, slow-growing, rare, aggressive, and vascular tumor revealed with similar clinical features as other brain tumors.<sup>[5]</sup>

SFT is commonly mistaken for the dura and misconstrued for meningiomas on imaging. Situated intracranially in the arachnoid layer, vascularity and mesenchymal origin is the trait SFT shares with meningiomas.<sup>[5]</sup> Dissimilar to meningiomas, SFTs are malignant neoplasms and have a propensity for local recurrence along with extracranial metastasis even post-resection.<sup>[6]</sup> Tumor enhancement, dural tail, cystic necrosis, and intra-tumoral perfusion may contribute to differentiating SFT from meningioma.

The exceedingly vascular characteristic constitutes considerable challenges in the management. Due to the rarity of the tumor, there is an absence of a treatment paradigm and recommendations

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regarding management. However, surgery remains the primary treatment modality. The recent literature and studies predominantly suggest gross tumor excision as the predominant predictor for survival.<sup>[7,8]</sup> Other predicting factors for overall survival (OS) and progression-free survival (PFS) are the size of the tumor, grade, site, and adjuvant treatment.<sup>[9]</sup> Surgery followed by postoperative radiation has a role in controlling local failure. Post-operative radiation therapy (PORT) has a beneficial effect on local control and PFS.<sup>[10,11]</sup>

Whether PORT contributes to the clinical outcomes in patients with gross total excision or low-grade SFT is not proven.<sup>[10]</sup> Management commonly includes surgery followed by postoperative radiotherapy (PORT), specifically in cases where only sub-total resection (STR) could be achieved, and a macroscopic tumor was left. However, the efficacy of PORT is debatable. Studies suggest PORT has a beneficial effect on in-field tumor control, which has directed a change in the pattern of failures from local failures to distant metastases.

### CASE SERIES

We hereby present a retrospective analysis of 4 cases referred from the neurosurgery unit to the Department of Radiation Oncology in Vardhman Mahavir Medical College from July 2024 to April 2025. All 4 cases included in this study were histopathologically confirmed as intracranial SFT with the

required immunohistochemistry.

The baseline characteristics of the 4 patients have been summarized in Table 1, with individual patient discussions underneath.

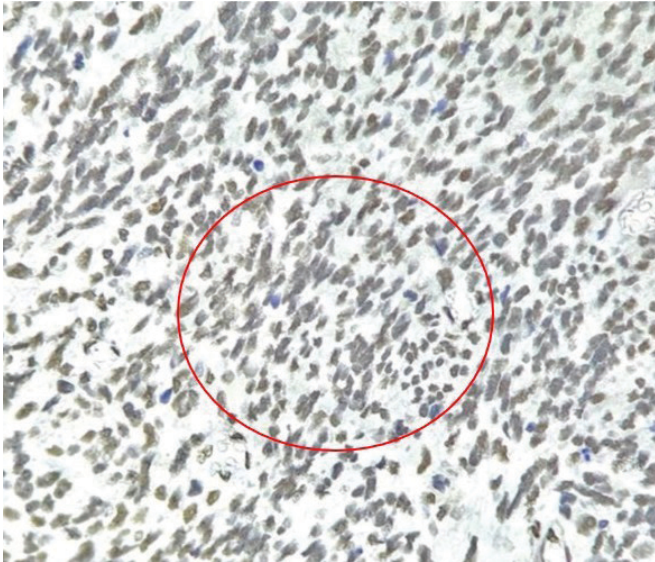
#### Case 1

A 30-year-old married lady with a completed family presented with complaints of right hemicranial headache, insidious in onset, progressive in nature, for 1.5 years, associated with intermittent vomiting. There was no history of seizures, diplopia, loss of consciousness, or any neurological deficit. She was evaluated for the same with contrast-enhanced magnetic resonance imaging (CEMRI) of the brain, which was suggestive of a 5.5\*3.4\*4.8 cc space-occupying lesion attached to the falx with perilesional edema and mass effect, isointense on T1 and T2 weighted imaging, likely meningioma. She underwent right frontotemporal craniotomy with gross total excision in the neurosurgery department. Her histopathology report was suggestive of a dedifferentiated SFT with chondrosarcomatous change, right parafalcine region. Immunohistochemistry (IHC) showed positive for STAT6 [Figure 1], Vimentin, CD99, and S100. Tumor cells were negative for EMA, PR, GFAP, and CD34. Ki-67 was 15-20%. She had developed postoperative complications with the leakage of cerebrospinal fluid (CSF) and wound infection with *Escherichia coli*, for which she

**Table 1:** Summary of patient characteristics

Characteristics	Case 1	Case 2	Case 3	Case 4
Age	30 years	52 years	39 years	39 years
Gender	Female	Male	Male	Male
Symptoms	Headache, vomiting	Headache, loss of consciousness, vomiting	Headache	Headache
Neurologic deficit	None	Yes	None	None
Baseline tumor size	5.5*3.4*4.8 cc	5.2*4.9*5.5 cc	30*26*1.5 cc	5.3*62*53 mm <sup>3</sup>
Tumor site	Right parafalcine region	Posterior falx involving the sagittal sinus	Right frontal region	Right tentorium cerebelli
Surgery	STR	STR	GTR	STR
Post-operative tumor size	13*11*12.5 mm <sup>3</sup>	4.2*4.5 *4 cc	-	3.3*7*8mm <sup>3</sup>
Grade	SFT with chondrosarcomatoid dedifferentiation	2	1	2
Postoperative radiotherapy	60 Gy/ 30 Fractions/ 5 days/ 6 weeks	Recommended	60 Gy/ 30 Fractions/ 5 days/ 6 weeks	60 Gy/ 30 fractions/ 5 days/6 weeks
Follow up	5 months	-	3 months	-

STR: Sub-total resection, GTR: Gross tumor resection

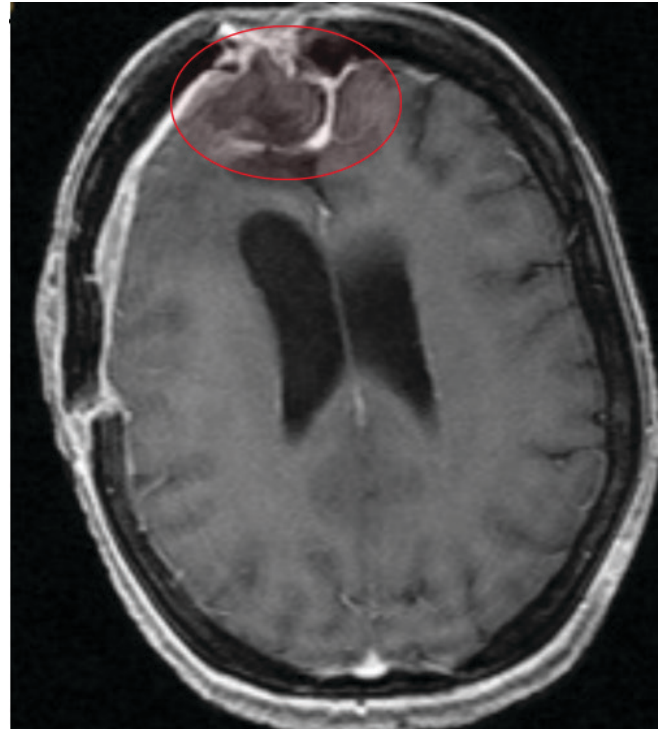


**Figure 1:** Microscopy of H and E section (x 100) showing STAT6 nuclear positivity (red circle). H and E: Hematoxylin and eosin

was managed conservatively and discharged after 30 days. She was referred to the Radiation Oncology department for further management. Her postoperative CEMRI brain done after 3 months showed a homogeneously enhancing, extra-axial, dural-based T1 hypointense and T2 hyperintense lesion of 13\*11\*12.5 mm<sup>3</sup> along the right frontal convexity, likely residual or recurrent lesion with post-operative right fronto-temporo-parietal craniotomy changes [Figure 2]. She was planned for adjuvant radiotherapy to a dose of 60 Gy in 30 fractions over 6 weeks with a conventional fractionation schedule. Thereby, she completed her treatment without any planned treatment gap. In the first phase, 50 Gy in 25 fractions were delivered, while in the second phase, 10 Gy in 5 fractions were delivered. She has been advised of the CEMRI brain upon her first follow-up.

### Case 2

A 52-year-old male had headaches for 5 months, dizziness and vertigo for 4 months, and a history of an episode of loss of consciousness. The patient has a medical history of a left-sided space-occupying lesion in the brain a year ago, for which he had undergone surgery. Previous records were not available. He came to the hospital with complaints of vomiting for 8 days. On evaluation with CEMRI brain, there was an ill-defined lesion approximately 5.2\*4.9\*5.5 cm in the left posterior parietal convexity, which was displacing the posterior falx, infiltrating the superior sagittal sinus, with evidence of midline shift of about 7 mm towards the right side. The lesion was hypointense on T1W1, heterogeneously hyperintense on T2W1, and did not show restricted diffusion on diffusion-weighted imaging (DWI). Subdural CSF is seen in the right posterior parietal convexity, seeping into the

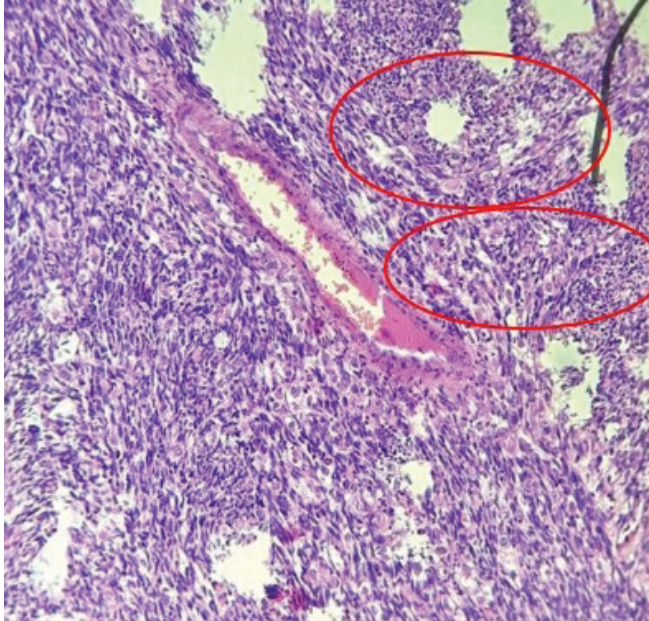


**Figure 2:** CEMRI of the brain showing a homogeneously enhancing, extra-axial, dural-based T1 hypointense and T2 hyperintense lesion of 13\*11\*12.5 mm<sup>3</sup> along the right frontal convexity with post-operative right fronto-temporo-parietal craniotomy changes (red circle). CEMRI: Contrast-enhanced magnetic resonance imaging

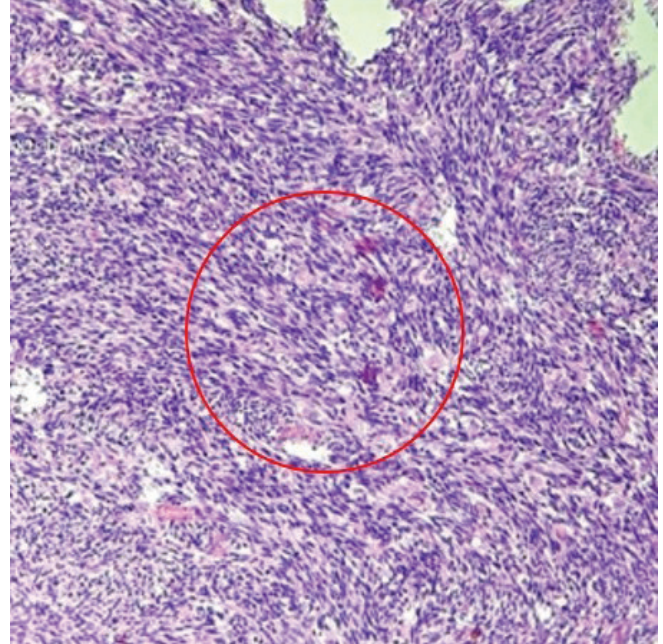
overlying subgaleal region through a postoperative defect. Then, he underwent left parieto-occipital craniotomy with decompression of the tumour with bone flap placement. The histopathology report showed white, grey, and brown soft tissue pieces measuring 6.5\*3\*2.2 cc. Sections showed a cellular tumor composed of tumor cells arranged in sheets and haphazardly in a collagen stroma. In addition, branching hyalinized staghorn vasculature is seen [Figure 3]. Individual tumor cells show ovoid to elongated nuclei, dispersed chromatin with eosinophilic to clear cytoplasm. Mitosis is a 6/10 high-power field. During IHC, tumor cells are weakly positive for CD34 and STAT6 and confirmed as SFT grade 2. A postoperative imaging was done, which showed residual disease 4.2\*4.5 cm infiltrating the superior sagittal sinus [Figure 4]. On examination, the patient was having left upper and lower limb paresis. He was advised PORT.

### Case 3

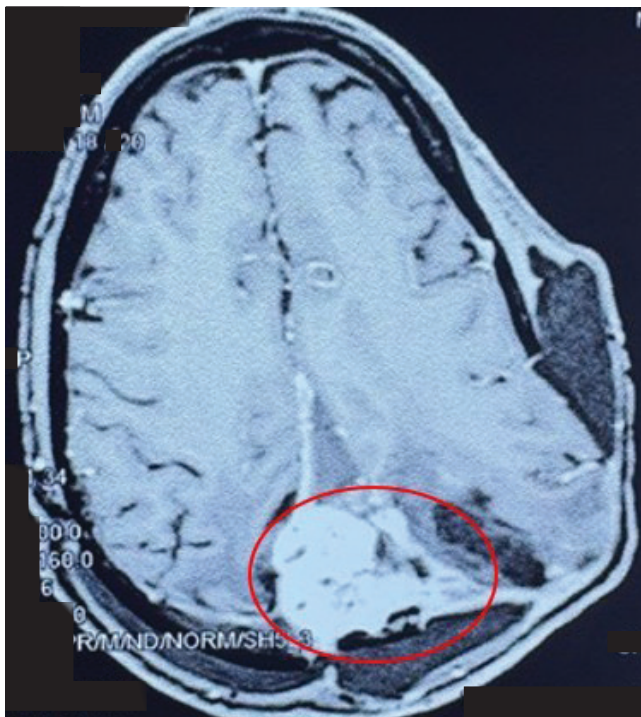
A 39-year-old male presented with complaints of headache for 7 months, not associated with seizure, loss of consciousness, or vomiting. There was no history of comorbidities. A CEMRI brain was done, which was suggestive of a large dural-based



**Figure 3:** Microscopy of H and E section (x 40) showing Irregular and elongated dilated vascular channels (red circles). H and E: Hematoxylin and eosin



**Figure 5:** Microscopy of H and E section (x 40) showing Spindle cells arranged in sheets and fascicles (red circle). H and E: Hematoxylin and eosin



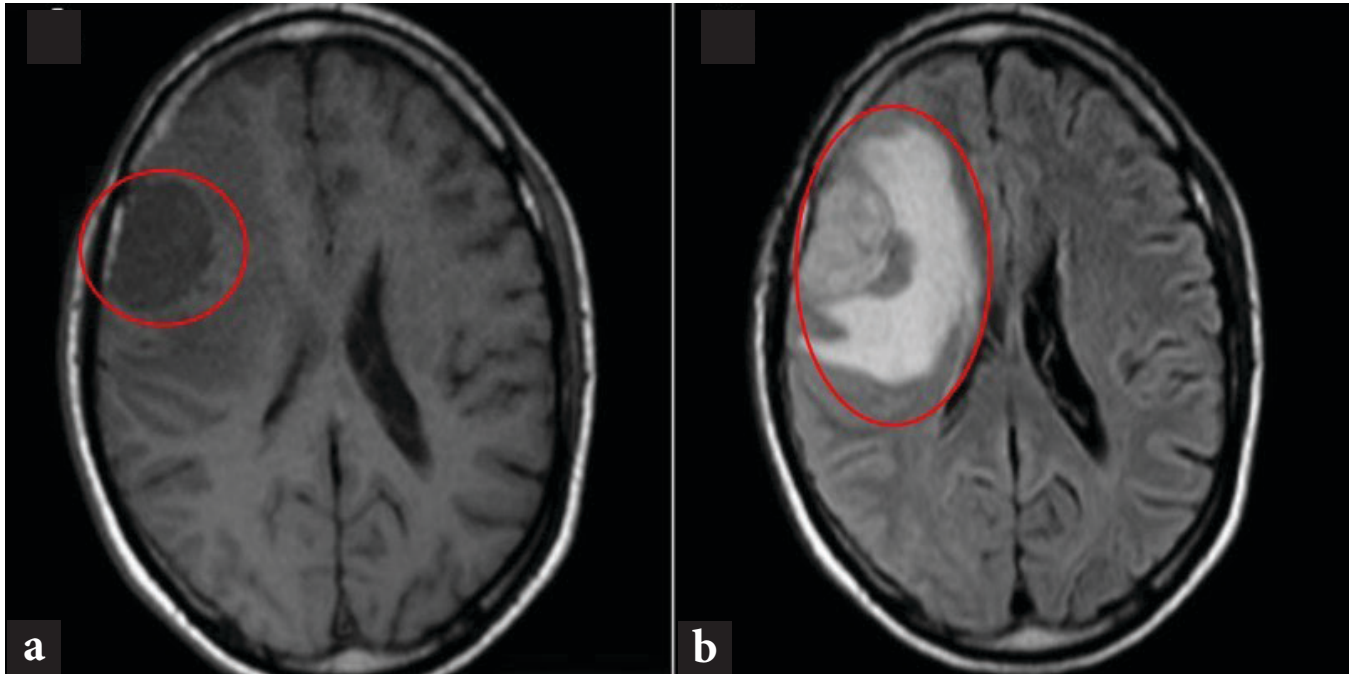
**Figure 4:** CEMRI of the brain showing residual disease 4.2\*4.5 cm infiltrating the superior sagittal sinus (red circle). CEMRI: Contrast-enhanced magnetic resonance imaging

mass lesion measuring approximately 30\*26\*1.5 cc centered around the subcortical aspect of the right frontal lobe with marked edema. Adjoining sulcal spaces and the right lateral ventricle were mildly effaced. This lesion appeared

hyperintense on T2W1 and hypointense on T1W1 with foci of restricted diffusion in the anterior aspect of the lesion. He underwent a right front-temporo-parietal craniotomy with gross tumor excision. The histopathology showed 3.5\*3.5\*2 cc grey-brown globular encapsulated soft tissue. Sections examined showed a moderately differentiated cellular neoplasm composed of bland spindle to oval-shaped cells arranged in a pattern with less architecture, with alternating hyper- and hypocellular areas. The spindle cells had elongated nuclei and finely dispersed chromatin [Figure 5]. There was minimal nuclear pleomorphism, and mitotic figures were rare. Mitosis was less than 5/10 high-power field, and no evidence of necrosis. Upon IHC, the cells were positive for STAT6 and EMA and negative for CD34, GFAP, PR, Inhibin, and S100. The features were suggestive of SFT grade 1. Postoperative imaging was done after 41 days, which was suggestive of no evidence of residual disease [Figure 6]. The patient was young and was given the option of observation with CEMRI. He was kept on postoperative radiotherapy. He was planned for 60 gray in 30 fractions in two phases.

#### Case 4

A 39-year-old male presented to the outpatient department with a history of headache for 1 year. He was diagnosed with SFT grade 2 three years and 7 months back, for which he had undergone right parieto-occipital craniotomy and gross tumor decompression. Last year, his MRI brain with contrast showed CSF filled the postoperative cavity underneath an extra-axial mass lesion in the right tentorium cerebelli,



**Figure 6:** CEMRI of the brain showing no residual disease with post-operative changes (red circle) on (a) T1 and (b) T2 sections. CEMRI: Contrast-enhanced magnetic resonance imaging.

53\*62\*53 mm<sup>3</sup> with inhomogeneous enhancement seen with an enhancing dural tail. The right lateral ventricle was compressed. The left lateral ventricle was dilated with a shift of the midline to the left. Chest X-ray was normal. The patient underwent surgery for the same with a redo right parieto-occipital craniotomy and tumor excision. His post-operative non-contrast computed tomography (CT) head showed post-operative changes in the right temporoparietal region with an underlying post-operative cavity with thin subdural collection at the operative site and hemorrhagic focus in the right thalamic region extending into the right half of the midbrain with perilesional edema. The rest of the course in the hospital was uneventful. His post-operative histopathology showed soft tissue pieces altogether measuring 10\*8\*2 cm. Sections on microscopy showed a moderately cellular tumor composed of sheets of round to oval nuclei with moderate nuclear pleomorphism and a moderate amount of cytoplasm. Intratumoral staghorn vessels and thickened blood vessels/capillaries were present. Mitosis was 4-5/10 hpf. IHC showed positivity for CD34, BCL2, vimentin, EMA, and CD99 and negativity for GFAP, S100. Ki 67 labelling index was 14 %. The impression made was SFT grade 2. His post-operative CEMRI brain [Figure 7] was done, which showed evidence of craniotomy in the right parietal and temporal region. A CSF-filled post-operative cavity was seen underneath, measuring 65\*92\*44 mm<sup>3</sup>. It appeared in communication with the temporal horn of the right lateral ventricle. A diffuse enhancement was seen along the tentorium cerebelli with a focal enhancing nodular area measuring 3.3\*7\*8 mm<sup>3</sup>.



**Figure 7:** CEMRI of the brain showing a post operative cavity measuring about 51\*86\*61 mm<sup>3</sup> in the parietotemporooccipital lobe on right side was seen (red circle) with hemosiderin staining seen along the periphery of the post-operative cavity with diffuse enhancement seen along the tentorium cerebelli with a focal enhancing nodular area measuring 3.3\*7\*8 mm<sup>3</sup> suggestive of residual disease with post operative changes on T1 CEMRI: Contrast-enhanced magnetic resonance imaging.

He came to us for further management, and he has been advised to undergo post-operative radiotherapy of 60 Gy in 30 fractions. A repeat CEMRI brain was done after 1 month, which showed right parietotemporoccipital craniotomy status. A large CSF intensity post-operative cavity measuring about 51\*86\*61 mm<sup>3</sup> in the parietotemporoccipital lobe on the right side was seen, with hemosiderin staining seen along the periphery of the post-operative cavity. A nodular enhancing lesion about 10\*11\*4 mm was seen along the tentorium cerebelli on the right side. Gliosis was seen in the occipital lobe on the right side. An oval area of signal abnormality with blooming and surrounding gliosis was seen in the thalamus on the right side, suggestive of hemosiderin deposition due to prior vascular insult. The patient is undergoing his radiation treatment.

## DISCUSSION

The WHO classified CNS-differentiated SFT and HPC as distinct entities in 2007.<sup>[12]</sup> Both have the common immunohistochemical features of NAB2 and STAT6 gene fusion in addition to STAT6 overexpression. These precise markers led to the conclusion of the WHO classification of CNS tumors in 2016 as SFTs and HPCs as a single entity and referred to as SFT/HPC. As per the latest WHO classification, these tumors come in the subclassified category of mesenchymal, non-meningothelial tumors and are renamed to SFT.<sup>3</sup> The term HPC is regarded as obsolete now. A three-tiered grading nomenclature is still reserved in CNS tumors. Grade 1 is consistent with highly collagenous, low cellularity spindle cell lesions formerly called SFT. Grade 2 is consistent with a more cellular, less collagenous tumor with plump cells and staghorn vasculature that was previously recognized as HPC in the CNS. Grade 3 is consistent with anaplastic HPC earlier; differentiated on the basis of more than or equal to mitoses/10 high-power fields [Table 2].

**Table 2:** Retirement of the term of SFT/HPC, as only the Solitary fibrous tumor exists now. WHO grading of CNS tumors is still applied, though.

<b>Grade I</b>	Most often corresponds to highly collagenous, relatively low-cellularity spindle cell lesions previously diagnosed as SFT.
<b>Grade II</b>	Typically corresponds to a more cellular, less collagenous tumor with plump cells and staghorn vasculature that was previously diagnosed as HPC in the CNS.
<b>Grade III</b>	Corresponds to what was termed “Anaplastic HPC” in the past; diagnosed on the basis of ≥5 mitoses/10 hpf.
SFT: Solitary fibrous tumor, CNS: Central nervous system, HPC: Hemangiopericytoma, WHO: World Health Organization	

Patients with high-grade histology and nuclear atypia have with considerable certainty of relapse, but few studies validated that even WHO grade 1 SFT/HPC may recur.<sup>[13]</sup> There hasn't been any treatment directed towards its characteristic NAB2-STAT6 gene fusion.

Dedifferentiation is regarded as an independent prognostic factor for local recurrence, distant metastasis, and poor prognosis.<sup>[14]</sup> Over-expression of the NAB2-STAT6 gene fusion promotes cell proliferation and triggers activation of EGR1 target genes and their promoters, which further leads to the promotion of gene expression and disruption of EGR1-related metabolic mechanisms.<sup>[15]</sup> However, there are very few cases where gene fusion does not happen, and the molecular mechanisms in them need further study. Previous studies have shown that the loss of CD34 can also be associated with SFT/HPCs' malignant transformation.<sup>[16]</sup> Theories have come up regarding the role of impairment of TP53 and APAF1, leading to abnormal apoptotic function found to be contributory towards malignant SFT/HPCs transformation.<sup>[17]</sup> Current studies suggest that TERT promoter mutations also have a distinct role in the malignant progression of SFT/HPCs.<sup>[18]</sup>

SFTs have a resemblance to meningiomas, where differentiation is often difficult due to clinical and radiological similarities. SFTs tend to occur at a younger age compared to meningiomas, which manifest later. MRI shows iso-signal intensity on T1WI and heterogeneous, slightly long/short signal on T2WI. There is a remarkable contrast after gadolinium enhancement. Cystic degeneration, necrosis, and bone resorption may also be visualized. The tumor is situated outside the brain and emerges from the meninges, thereby being misdiagnosed as meningioma before surgery. Ohba *et al.* have ascertained that SFT/HPCs could be differentiated from meningioma with high accuracy using age and inositol values, with high specificity and sensitivity.<sup>[19]</sup>

This case series from a tertiary center in a developing country provides profound findings where some of the observations are congruous with those reported in the literature, while others show slight disparity from established retrospective studies. Three of the patients were male, while one was female in this study. A few of the studies suggest a gender predilection with male predominance,<sup>[20]</sup> while some showed female predominance.<sup>[21]</sup> Also, two cases were young and in their 30s, while one was in their 50s in this case series. Gross tumor resection (GTR) was done in one case, with sub-total resection (STR) done in two. Surgery was aimed at considering tumor removal as well as enhancement of the quality of life.

Due to the rarity and locally aggressive nature of SFTs, there is no gold standard for management, and most of the literature concerning treatment comes from minimal evidence and limited retrospective studies. The most common and most broadly accepted initial treatment is surgical resection. Studies show variable results concerning the benefit accorded by surgery alone. Improved relapse-free survival has been documented in patients with GTR, with few suggesting GTR

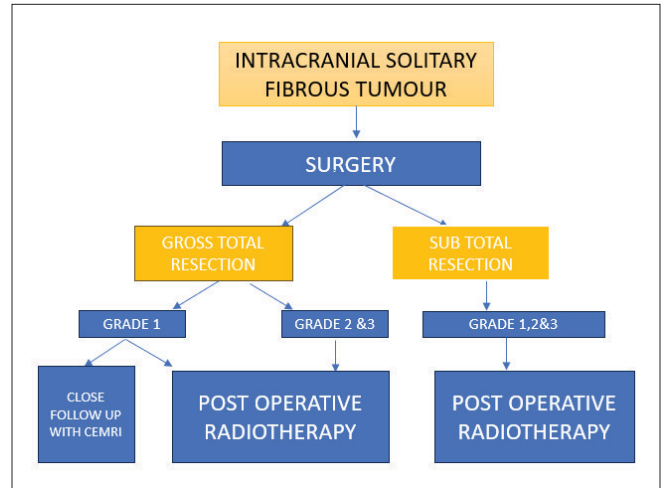
association with an OS benefit,<sup>[8,22]</sup> while others disapprove of the benefit.<sup>[7,23]</sup> To accomplish complete resection is, however, very difficult given the behavior of SFTs to involve neighboring vascular structures.<sup>[21]</sup> GTR affects the development of extracranial metastases, and this has been reported in previous studies.<sup>[24]</sup> Complete surgical resection is the most important prognostic factor, especially due to the unknown and uncertain recurrence and metastasis pattern. Postoperative chemotherapy has shown very little benefit.

One of our patients had a tumor more than 6 cm in size and recurred after 2 years. The tumor size has a multifactorial impact on recurrence. Tumors more than 6 cm recurred at a median time of 2.1 years compared to 10.1 years for tumors less than 6 cm in dimension. Non-skull base HPCs recur remarkably before those arising from the skull base. The median time until recurrence was 5 years, with 1-year, 5-year, and 10-year PFS rates of 96%, 49%, and 28%, respectively, at 5 years from the first surgery. Survival varied and was in the range of 67% to 93% depending on the series.<sup>[25]</sup> [Table 3]

**Table 3:** Retrospective studies with more than 40 patients showing 1-year, 5-year, and 10-year actuarial survival

Author, Year	1 year (%)	5 years (%)	10 years (%)
Rutkowski MJ et al., 2011 <sup>[25]</sup>	100	92	68
Melone AG et al., 2014 <sup>[21]</sup>	100	74.4	72.2

Although the role of PORT in patients with SFT is inconsistent, the consensus is that PORT is advantageous to patients undergoing surgery [Figure 8]. Adding radiation to surgery in the treatment of SFT has an effect by impairing tumor growth by changing the natural biology of the left-behind tumor cells, thereby arresting division and blocking tumor progression. The radiosensitivity of SFT has not been fully established. There is no current established standard protocol regarding the optimal modality or the dose prescription of radiotherapy. Few studies suggest that comparing STR alone versus adjuvant PORT after STR may improve OS and recurrence-free survival (RFS).<sup>[26-31]</sup> Other studies have documented that PORT following GTR can also lengthen the OS or ameliorate local control. However, few have reported that PORT after GTR has no effect on survival or must not be used in adjuvant settings except for recurrent patients. Various studies with their results have been presented to have a review of the literature [Table 4]. It is still unclear whether stereotactic radiosurgery (SRS) or radiotherapy is a better modality after surgery.



**Figure 8:** Schematic representation showing management of recently diagnosed intracranial solitary fibrous tumor

Standard follow-up protocols for SFT after primary treatment have not been set. After primary resection, patients may develop recurrence years or even decades later. Few centres have reported that the local control rate was better when the radiotherapy dose was not less than 60 Gy.<sup>[20]</sup> The target volume for PORT should include the residual tumor or the surgical cavity with a margin of 1 to 2 cm to account for possible microscopic disease.

Modalities like SRS, Fractionated SRS, Gamma knife, and particle beam therapy have been used in studies. The biological effect of IMRT is much higher than that of SRS, which may lead to higher local control. SRS is indicated in patients with small tumor volumes, especially in residual or recurrent cases.<sup>[32,33]</sup> There is a necessity for the conduct of multicenter randomised trials with a larger sample size to determine the outcomes and definitive results of PORT on local control and survival between IMRT and SRS as PORT options.

C12-ions are another possibility for reirradiation due to their higher relative biological effectiveness and their higher linear energy transfer, leading to better dose conformity, which is associated with steeper dose gradients, and therefore better sparing of adjacent tissues and critical organs.

Bevacizumab in combination with temozolomide shows a benefit in an overall response rate of 21.4% and median progression-free survival, six-month progression-free survival, and overall survival of 17 months, 65%, and 45 months, for locally advanced SFT/HPC.<sup>[34]</sup> Pazopanib in a phase 2, multi-institutional trial has shown partial response in 58% of advanced malignant SFTs<sup>[35]</sup> with diarrhoea, hypertension, and fatigue as the most frequent adverse events. It is essential to maintain radiographic records for observation and monitoring on follow-up.

**Table 4:** Summary of studies on intracranial solitary fibrous tumor

Author, Year	No. of cases	Study period	Median age at diagnosis	Male, Female	Most common site	GTR	STR	PORT	MS (months)	Recurrence
Bassiouni H <i>et al.</i> , 2007 <sup>[26]</sup>	12	1987-2004	38	7,5	Falx and cerebellopontine angle	12	-	2	119	5 41.7%
Rutkowski MJ <i>et al.</i> , 2010 <sup>[7]</sup>	40	1989-2010	48	16,19	Skull base (60%)	16 46%	19 54%	-	16.2	19 54%
Melone AG <i>et al.</i> , 2014 <sup>[21]</sup>	43	1980-2010	46.9	17,26	Falx/parasagittal area	30	13	21	83.5	18 41.86%
Yip CM <i>et al.</i> , 2020 <sup>[27]</sup>	7	2009-2019	52.86	3,4	Falcine/ parasagittal and tentorium cerebelli	1	6	5	91.36	-
Chenhui Z <i>et al.</i> , 2024 <sup>[28]</sup>	17	2010-2020	55.1	11,6	Subtentorium	13	4	4	55.1	5 17%
Gou Q <i>et al.</i> , 2022 <sup>[29]</sup>	42	2008-2022		25,17	Supratentorium	22	15	37	96	-
Toader C <i>et al.</i> , 2024 <sup>[5]</sup>	14	2014-2022		5,9	Diverse	11	3	2	-	-
Lottin M <i>et al.</i> , 2023 <sup>[30]</sup>	88	2006-2015	54.5	50,38	Supratentorium	75	9	31	156	59 67%

STR: Sub-total resection, GTR: Gross tumor resection

The small cohort size and retrospective nature of this case series inherently limit the statistical power and generalizability of our findings. However, given the rarity of intracranial SFT, especially in the Indian population, the current series provides valuable real-world data reflecting diagnostic and management challenges in resource-constrained settings.

## CONCLUSION

There is a lack of clinical data in the newly defined SFT. There are no prospective studies or multicenter research establishing the standard of care in SFT. However, surgery with GTR remains the main treatment domain. PORT is a part of adjuvant treatment in all grades of SFT for controlling local recurrence. Adjuvant chemotherapy has very little role. Most of the previous studies on the management of intracranial SFT/ HPC are based on a single centre and therefore have discordance. As of now, there has been retrospective research on small case series, and cumulative database analysis has inconsistent results.

**Author contributions:** AS and AM: Collected the cases and follow-up of patients; SZ: Performed histopathology examination, and AS and AM: Wrote and reviewed the manuscript. All the authors read and approved the final manuscript.

**Ethical approval:** Institutional Review Board approval is not required.

**Declaration of patient consent:** The authors certify that they have obtained all appropriate patient consent forms. In the form, the

patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Use of artificial intelligence (AI)-assisted technology for manuscript preparation:** The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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