

Primary intracranial fibrosarcoma

Primary intracranial [fibrosarcoma](#) (PIF) is a rare tumor with a high relapse rate and a dismal survival rate.

A study of Ma et al. aimed to delineate the clinical characteristics of primary [intracranial fibrosarcoma](#) (PIF) and the [risk factors](#) for outcomes. They reviewed 15 PIF patients, who underwent surgical treatment from January 2009 to December 2018. Meanwhile, 36 cases from the prior literature between November 1962 and December 2019 were also retrieved and pooled to identify the risk factors. In the cohort of Ma et al., while the cystic component (46.7%), perilesional edema (83.3%), and vascular flow void (66.7%) were commonly observed, no patient was accurately diagnosed. The 2-year relapse-free survival (RFS) and overall survival (OS) were 12.2% and 30.2%, respectively. Based on the pooled data, tumor size ($p = 0.006$), Ki-67 index ($p = 0.004$), and radiotherapy dose ($p = 0.029$) were prognostic factors for RFS in univariate analysis. In the univariate analysis, tumor size ($p = 0.002$), NGTR ($p = 0.049$), and high Ki-67 index ($p = 0.019$) were significant predictors for OS; and further multivariate analysis ($n = 18$) showed that large tumor size (≥ 5 cm; HR 14.613, $p = 0.022$) and high Ki-67 index ($\geq 30\%$; HR 5.879, $p = 0.020$) were the independent risk factors for OS. Due to the rarity and nonspecific clinic radiological features, the correct diagnosis of PIF before surgery was challenging. The outcomes of PIF were poor, and GTR plus radiotherapy (at least 60 Gy) might benefit the outcomes and were recommended. Future study with a large cohort is needed to verify these findings ¹⁾.

Zhang et al. presented a case of a 20-year-old male who presented with a sudden-onset headache. Magnetic resonance imaging of the brain showed a hemorrhagic extra-axial space-occupying mass. The mass was surgically resected, and biopsy was consistent with PIF. The patient was lost to follow-up and presented with recurrence 3 months later. He expired from complications of the tumor. PIF is a diagnosis of exclusion: More common intracranial tumors should first be excluded. Biopsy is necessary to diagnose PIF ²⁾.

Lee et al. presented a case of PIFs mimicking a [falx meningioma](#) in a 17-year-old man ³⁾.

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Ma XJ, Li D, Li H, Wang L, Hao SY, Zhang LW, Zhang JT, Wu Z. The clinicoradiological features and surgical outcomes of primary intracranial fibrosarcoma: a single-institute experience with a systematic review. *Neurosurg Rev.* 2020 Feb 8. doi: 10.1007/s10143-020-01249-8. [Epub ahead of print] PubMed PMID: 32036505.

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Zhang N, Guo L, Kuang H, Ji Y, Zeng X. Primary Intracranial Fibrosarcoma: Case Report and Systematic Review of Literature. *World Neurosurg.* 2019 Mar;123:251-255. doi: 10.1016/j.wneu.2018.12.005. Epub 2018 Dec 19. PubMed PMID: 30579028.

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Lee JG, Song SW, Koh YC, Cho J, Choi JW, Roh HG, Lim SD. Primary intracranial fibrosarcoma presenting with hemorrhage. *Brain Tumor Res Treat.* 2013 Oct;1(2):91-4. doi: 10.14791/btrt.2013.1.2.91. Epub 2013 Oct 31. PubMed PMID: 24904898; PubMed Central PMCID: PMC4027100.

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