

abstract

Incidence and Management of Posterior Fossa Syndrome in Children at a Tertiary Care Hospital in Karachi; a 10-year Retrospective Cohort

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doi.org/10.69690/ODMJ-018-0425-734



**SIOP ASIA 2025
SAUDI ARABIA**

ONCODAILY MEDICAL JOURNAL

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Incidence and Management of Posterior Fossa Syndrome in Children at a Tertiary Care Hospital in Karachi; a 10-year Retrospective Cohort

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Introduction: Approximately 60% of pediatric central nervous system (CNS) tumors originate within the posterior fossa. Posterior Fossa Syndrome (PFS), also known as Cerebellar Mutism Syndrome, is a major and sometimes devastating complication of posterior fossa surgery. The incidence of posterior fossa syndrome varies from 10-45% in reported studies. This study aims to report the incidence and risk factors of PFS along with the role of occupational therapy, speech therapy, and zolpidem in alleviating the symptoms.

Methodology: Patients were included if they were ≤ 18 years old, developed PFS after posterior fossa tumor resection, and were treated between 2014 and 2023 at Aga Khan University Hospital. Data was collected retrospectively by chart review and included symptoms, radiological findings, histopathology, management, and outcomes.

Results: One-sixty-eight patients with posterior fossa tumors were identified; 116 were males with a median age of 8 years. Tumor location was cerebellar hemisphere in 78 (46.4%) patients, fourth ventricle in 76 (45.2%), cerebellar peduncle in 8 (4.8%), and pons in 6 (3.6%). Medulloblastoma was the most common tumor (37.5%). Of the 168 patients, 63 (37.5%) developed PFS, and the incidence was higher in male patients ($P=0.001$), IVth ventricular tumors ($P<0.001$), and medulloblastomas ($p<0.001$). There was a greater likelihood of improved speech in those treated with speech therapy along with zolpidem ($p<0.001$).

Conclusion: The incidence of PFS after tumor resection is high in our setting. Patients treated with zolpidem showed significant improvement. The role of this medication should be confirmed in prospective clinical trials.