

Dr Sankeerth Kendyala, Junior Resident, Nizam's Institute of Medical Sciences, Hyderabad
Dr Ramakrishna N, Associate Professor, Nizam's Institute of Medical Sciences, Hyderabad

INTRODUCTION

Intraventricular lesions constitute a small proportion (1% to 10%) of all central nervous system tumors, originating from structures like the ependymal lining and choroid plexus. Clinically, they may be asymptomatic or present with various symptoms, posing a diagnostic challenge due to their diverse appearances. This subset of intracranial neoplasms encompasses a broad spectrum of both neuroepithelial and non-neuroepithelial tumors.

AIMS / OBJECTIVES

Our pictorial essay elucidates classical imaging patterns and emphasizes the importance of demographics, aiding radiologists in navigating differential diagnoses for precise diagnosis.

MATERIALS / METHODS

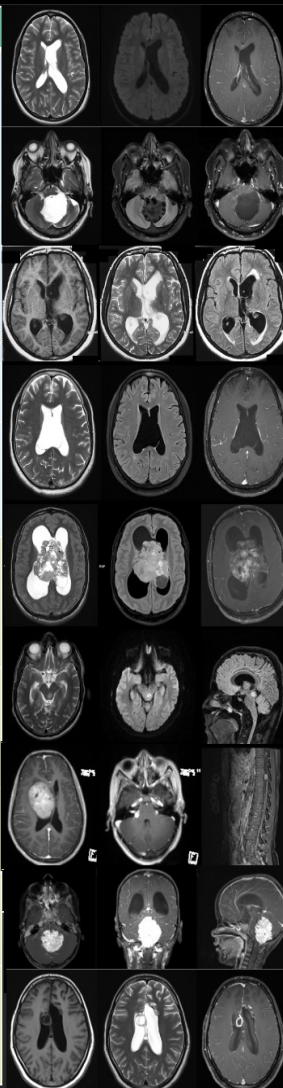
Brief descriptions of patient clinical information and imaging findings are illustrated via 18 histopathological confirmed cases from our institute.

CONCLUSION

Combining factors such as clinical features, lesion location, and imaging features can help to narrow down potential differential diagnoses for intraventricular lesions, and arrive at a correct diagnosis.

RESULTS & DISCUSSION

Lesion	Age	Location	T1	T2	FLAIR	Contrast	CA+2	Cystic	HGE	
Arachnoid cyst	any	Lateral, third, fourth	↓ ~CSF	↑	↓	-	-	present	-	
Ependymoid cyst	20-40	Fourth	↓ ~CSF	↑	Heterogeneous dirty (>CSF)	Thin peripheral enhancement	-	present	rare	
NCC	15-40	anywhere	↓	↑	↓	Eccentric enhancing nodule	possible	possible	-	
Cavum veli interpositum cyst	Anyone, incidental	Cavum veli interpositum	↓	↑	↓	-	-	present	-	
Central neurocytoma	20-40	Lateral (attached to septum pellucidum)	-	-/↑	-/↑, cystic component	Mild to moderate heterogeneous	Common	present	uncommon	
Subependymoma	>15, middle age and old age	Fourth, lateral	↓	↑	↑	variable	Possible	Possible	Possible	
Meningioma (MISME)	30-60	atria	-/↓	-/↑	-/↑	intense	Can be present	Possible	-	
Infratentorial ependymoma	childhood	Lateral, fourth	-/↓	↑	↑, with hypointense cystic spaces	Bright rim	heterogeneous	present	present	Possible
Myxoid glioneuronal tumor	Children, young adults	Septum pellucidum	↓	↑	↑	-	-	Can be present	-	



Lesion	Age	Location	T1	T2	FLAIR	Contrast	CA+2	Cystic	HGE
Ruptured dermoid cyst	<30	rare	↑	↓/-/↑	↓/-/↑	Mass generally won't enhance, pial enhancement in cases of rupture	present	present	Can be present
Choroid plexus papilloma	Infants and young children	Lateral (atrium) or 3rd in children, 4th in adults	-/↓	-/↑	-/↑	Marked and homogenous, frond like pattern	Can show fine specks	Possible	Possible
Pilocytic astrocytoma	childhood	Lateral, third or fourth	Solid: ↓ Cyst: ↓	Solid: ↑ Cyst: ↑	Solid: ↓ Cyst: ↓	Vivid, with cyst wall enhancement	possible	present	uncommon
Medulloblastoma	Children, less common in adults	Cerebellum, rarely 4th ventricle	↓	-/↑	-/↑	heterogeneous	Possible	Possible	-
Germinoma	10-12	rare	-/↑	-/↑	-/↑	Vivid and homogeneous	central	possible	Possible
Metastasis	Adults > children	Atria	↓	↑	↑	intense	-	Can be present	Can be present
SEGA	childhood	lateral	↓/-	↑	↑	marked	Can be present	-	-
Tuberculoma	All	uncommon	↓/-/↑	↓/-/↑	↓/-/↑	variable	possible	-	-
Subependymal lymphoma	>50	Fourth lateral	↓	↓/-/↑	↓/-/↑	High grade-intense Low grade-absent to moderate	-	-	Uncommon

