

TABLE 3 Spectrum of Neurological manifestations and its aetiologies' in different systemic cancers

Neurological diagnosis	No of children n (%)	Manifestations	Number of cases	Outcome
ALL (n=42)				
Intracranial bleed	6 (14.2)	Seizure Headache Ptosis Altered sensorium	3 1 1 1	Alive (1) Expired (5)
Chemical meningitis (due to intrathecal drugs methotrexate, cytosine arabioside)	5 (11.9)	Headache Seizure Facial nerve palsy	3 1 1	Alive (4) Expired (1)
Central nervous system relapse (CSF positive for malignant cell after initial remission)	6 (14.2)	Headache Seizure Loss of vision Aphasia <i>Symptoms not available from records</i>	1 1 1 1 2	Alive (2) Expired (4)
Cerebral atrophy	3 (7.1)	Seizure Loss of vision	2 1	Alive (2) Expired (1)
Peripheral neuropathy	3 (7.1)	Paraparesis Pain in both lower limb	2 1	Alive (1) Expired (2)
Central nervous system involvement (CSF positive for malignant cells at presentation)	1 (2.3)	Headache	1	Expired (1)
Posterior reversible encephalopathy syndrome (PRES)	1 (2.3)	Seizure	1	Expired (1)
Calcified granuloma	2 (4.7)	Seizure	1	Expired (2)
Brain abscess	1 (2.3)	Facial nerve palsy	1	Alive (1)
Cerebellar atrophy	1 (2.3)	Asymptomatic	1	Alive (1)
Deafness due to 8 th nerve neuropathy (secondary to vincristine?)	1 (2.3)	Bilateral hearing loss	1	Alive (1)

<i>Diagnosis not known</i>	12 (28.6)	Seizure Facial nerve palsy Bulbar palsy Shoulder drooping Quadriparesis Hemiparesis Altered sensorium	3 2 2 1 1 2 1	Alive (1) Expired (10) Not in follow up (1)
Retinoblastoma (n=34)				
Central nervous system metastasis (CSF cytology positive for malignant cells)	14 (41.1)	Headache Seizure Altered sensorium <i>No symptoms mentioned in records</i>	7 5 1 1	Alive (1) Expired (13)
Intracranial extension on neuroimaging	14 (41.1)	Headache Seizure No symptoms mentioned in records	5 4 5	Expired (14)
3 rd nerve palsy	1 (2.9)	Ptosis	1	Expired (1)
Meningitis	1 (2.9)	Seizure	1	Expired (1)
Spinal metastasis	1 (2.9)	Paraparesis	1	Alive (1)
Hydrocephalous	1 (2.9)	Headache	1	Alive (1)
<i>Diagnosis not known</i>	2 (5.8)	Seizure	2	Expired (2)
Ewings Sarcoma (n=15)				
Spinal metastasis	6 (40)	Paraparesis	6	Expired (6)
Intracranial extension	2 (13.3)	Seizure Loss of vision	1 1	Expired (2)
Intracranial bleed	1 (6.6)	Headache	1	Expired (1)
Cerebral atrophy	2 (13.3)	Paraparesis Facial nerve palsy	1 1	Expired (2)
Meningitis	1 (6.6)	Seizure	1	Alive (1)

Calcified granuloma	1 (6.6)	Seizure	1	Expired (1)
<i>No cause established</i>	2 (13.3)	Diplopia Paraparesis	1 1	Alive (2)
Neuroblastoma (n=14)				
Brain metastasis (distant metastasis diagnosed on basis of neuroimaging)	4 (28.5)	Seizure Loss of vision Headache	2 1 1	Expired (4)
Spinal metastasis (diagnosed on neuroimaging)	3 (21.4)	Paraparesis	3	Expired (3)
Intracranial bleed	2 (14.2)	Seizure Altered sensorium	1 1	Expired (2)
Meningoencephalitis	1 (7.1)	Seizure	1	Expired (1)
Gliososis (spinal cord)	1 (7.1)	Paraparesis	1	Lost to follow up (1)
Cerebral atrophy	1 (7.1)	<i>No symptoms mentioned in records</i>	1	Expired (1)
Hepatic encephalopathy	1 (7.1)	Altered sensorium	1	Expired (1)
<i>Diagnosis not established</i>	1 (7.1)	Paraparesis	1	Expired (1)
AML (n=24)				
Intracranial bleed	11 (45.8)	Seizure Altered sensorium Hemiparesis	5 5 1	Expired (11)
Central nervous system involvement (<i>CSF positive for malignant cells at presentation</i>)	3 (12.5)	Headache	3	Expired (3)
spinal metastasis on neuroimaging	3 (12.5)	Paraparesis	3	Expired (3)
Central nervous system relapse (<i>CSF positive for blast cells after initial remission</i>)	2 (8.3)	Headache	2	Expired (2)
Hepatic encephalopathy	1 (4.1)	Altered sensorium	1	Expired (1)
Calcified granuloma	1 (4.1)	Seizure	1	Expired (1)

Transverse sinus thrombosis	1 (4.1)	Ptosis	1	Expired (1)
<i>Diagnosis not established</i>	2 (8.3)	Seizure Facial nerve palsy	1 1	Expired (2)
Wilms's tumour (n=6)				
Cerebral atrophy	1 (16.6)	Seizure	1	Expired (1)
Cerebral edema	1 (16.6)	Seizure	1	Alive (1)
Intracranial bleed	1 (16.6)	Seizure	1	Expired (1)
Central nervous system metastasis on neuroimaging	1 (16.6)	Seizure	1	Expired (1)
<i>Cause not established</i>	2 (33.2)	Altered sensorium Hemiparesis	1 1	Lost to follow up (2)
Hodgkins's lymphoma (n=7)				
Intracranial bleed	2 (28.5)	Seizure	2	Expired (2)
Hydrocephalus	1 (14.2)	Headache	1	Expired (1)
Sciatic neuropathy on nerve conduction	1 (14.2)	Limb pain	1	Expired (1)
<i>Cause not established</i>	3 (42.8)	Seizure Features of raised intracranial pressure	2 1	Alive (2) Expired (1)
Rhabdomyosarcoma (n=6)				
Intracranial extension	2 (33.3)	Altered sensorium Headache	1 1	Expired (2)
Cerebellar atrophy	1 (16.6)	Ataxia	1	Alive (1)
Calcified granuloma	1 (16.6)	Facial nerve palsy	1	Expired (1)
Hydrocephalus	1 (16.6)	Seizure	1	Expired (1)
<i>Cause not established</i>	1 (16.6)	Foot drop	1	Expired (1)
Germ cell tumour (n=6)				
spinal metastasis	4 (66.6)	Paraparesis	3	Expired (4)

		Low backache	1	
Brain metastasis	1 (16.6)	Headache	1	Expired (1)
Cerebral atrophy	1 (16.6)	<i>Not available</i>	1	Alive (1)
Non Hodgkin's lymphoma (n=6)				
Central nervous system involvement (CSF positive for malignant cells on presentation)	2 (33.3)	Seizure	2	Expired (2)
Cerebral atrophy	1 (16.6)	Headache	1	Expired (1)
Intracranial bleed	1 (16.6)	Seizure	1	Expired (1)
Cerebral edema	1 (16.6)	Altered sensorium	1	Alive (1)
<i>Cause not established</i>	1 (16.6)	Altered sensorium	1	Expired (1)
Langerhans cell histiocytosis (n=3)				
Gliosis	1 (33.3)	Loss of vision	1	Alive (1)
Meningoencephalitis	1 (33.3)	Seizure	1	Expired (1)
<i>Cause not established</i>	1 (33.4)	Tingling, numbness in arm	1	Alive (1)