

Intraspinal tumours in the Kenya African

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Summary

Thirty-one cases of intraspinal tumours in the African have been described, with age, sex incidence, frequency, site and histopathology shown.

Intraspinal tumours in this series are compared with the larger series. Extradural and intramedullary tumours together with cervical spine tumours appear to be more frequent in this series. There is a high incidence of dumbbell tumours in the neurinomas. Sarcomas are the most common type of tumours and mainly affect the thoracic spine.

Résumé

31 cas de tumeurs intrarachidiennes chez l'Africain sont décrits, selon l'âge, le sexe, la fréquence, la localisation et l'histopathologie.

Les tumeurs intrarachidiennes de cette série sont comparées aux séries plus grandes. Les tumeurs extradurales et intramédullaires, ainsi que les tumeurs cervico-rachidiennes, semblent être plus fréquentes dans cette série. Il y a une haute incidence de tumeurs 'en forme d'haltères' dans les neurinomes. Les sarcomes sont le type de tumeur le plus commun et intéressent surtout le rachis thoracique.

A series of thirty-one patients has been treated surgically for intraspinal tumours in the last 4 years. This series does not include vascular malformations, parasitic or infectious lesions, nor arachnoiditis.

The ratio between intracranial tumours (126 cases) and intraspinal tumours (thirty-one cases) in this series is 4:1, with a higher incidence of intraspinal tumours if compared with other large series, as of Broager, 1953 (10:1) or Maleci, 1954 (8:1). The higher incidence of intraspinal tumours in our series

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may be due to a higher mortality rate of intracranial tumours before any treatment.

The age incidence of intraspinal tumours in this series is shown in Table 1.

There is a high incidence of sarcomas and gliomas and absence of meningiomas and neurinomas in the first two decades of life. In the third and fourth decades there is a prevalence of neurinomas, followed by sarcomas and gliomas and one meningioma. In the fifth decade there are only neurinomas and meningiomas.

The sex incidence of intraspinal tumours in this series is shown in Table 2.

There is a prevalence of males over females with a ratio of 2:1. Males appear to be affected more by malignant tumours (sarcomas and gliomas), while females seem to have a higher incidence of benign tumours (neurinomas and meningiomas).

The relative incidence regarding the various histopathological types in this series compared in percentage with other large series is shown in Table 3.

There are really no significant differences between the various series except perhaps for a higher incidence of extradural tumours, lower incidence of intradural extramedullary tumours and a higher incidence of intramedullary tumours,

It is well known that the preferred site of intraspinal tumours is the thoracic spine, due to the long anatomical extension of this part of the spine (Table 4).

In this series there is a relative preponderance of cervical spine tumours. The thoracic spine is affected to the same degree as in the larger series. The incidence of tumours of the lumbar spine is relatively low. It may be that quadriplegia is considered a more serious condition than paraplegia and that this plays a part in the higher percentage of cervical spine tumours.

TABLE 1. Age incidence of intraspinal tumours

Age (years)	Neurinomas	Sarcomas	Meningiomas	Gliomas	Lipomas
0-10	—	—	—	—	1
11-20	—	7	—	2	—
21-30	4	3	—	2	—
31-40	4	1	1	2	—
41-50	2	—	2	—	—

TABLE 2. Sex incidence of intraspinal tumours

Type of tumour	Males	Females
Neurinomas	6	4
Meningiomas	1	2
Gliomas	4	2
Sarcomas	9	2
Lipomas	1	—

TABLE 3. Histopathology of intraspinal tumours (%)

Type of tumour	Elsberg	Rasmussen		
		Adson	<i>et al.</i>	Ruberti
Extradural	28	28.7	36	35.5
Intradural	63	54	53	45.2
Intramedullary	8	16.6	11	19.3

TABLE 4. Preferred site of intraspinal tumours (%)

Author	Cervical	Thoracic	Lumbar
Elsberg	22.5	56.4	20.7
Rasmussen <i>et al.</i>	18	54	21
Grant	22.2	65.1	5.4
Fasiani (in Maleci)	20.1	63.8	16.1
Ruberti	35	55	10

The site and histopathology of the tumours in this series is shown in Table 5.

There is a high incidence of neurinomas and meningiomas together with gliomas in the cervical spine. There is a prevalence of sarcomas in the thoracic spine. There is a prevalence of benign tumours in the lumbar spine.

TABLE 5. Site and histopathology of intraspinal tumours

Site	No.	Histopathology
Cervical spine	6	Neurinomas
	3	Intramedullary gliomas
	2	Meningiomas
Thoracic spine	10	Sarcomas
	3	Neurinomas
	3	Intramedullary gliomas
	1	Meningioma
Lumbar spine	1	Neurinoma
	1	Sarcoma
	1	Lipoma

Discussion

The incidence of intraspinal tumours of the CNS in this series is higher than that reported in the larger overseas series. The younger age group appears to be more affected by malignant tumours (sarcomas and gliomas), while the older age group seems to be more affected by benign tumours (neurinomas and meningiomas).

Intraspinal tumours seem to affect males more than females. Males are more affected by malignant tumours (sarcomas and gliomas), while females seem to have a higher incidence of benign tumours (neurinomas and meningiomas).

Extradural and intramedullary tumours are more frequent in this series than in other large series. Cervical spine tumours also have a higher incidence in this series.

The cervical spine is mainly affected by benign tumours, while the thoracic spine is more affected by malignant tumours.

A high percentage (50%) of dumbbell tumours have been found in the neurinomas.

The use of an operating microscope has proven to be very useful in the removal of spinal cord tumours, particularly for the removal of intramedullary gliomas.

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(Received 21 April 1972)