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Meningiomas in the Sudan

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Summary. Fourteen cases of intra-cranial meningiomas in Sudanese patients are presented. Seven of them were seen in Maadi Neuro-Surgical Centre in the period May 1964–August 1966, and seven in Gamhouria Hospital in the period February 1970–February 1971. Taking into consideration that other patients are seen in Egypt and U.K., it seems that the frequency of meningiomas in Sudanese is high.

Résumé. 14 cas des méningiomes intra-craniales en malades Soudanais sont présentés. 7 cas avait été vu au Maadi Neurosurgical Centre pendant la période Mai 1964–Août 1966, et 7 au Gamburia Hospital pendant la période Février 1970–Février 1971. En considération qu'il y a des autres malades, qui sont vu en Égypte et le Royaume-Uni, il semblait que la fréquence des méningiomes parmi les Soudanais est en haut.

Without a high standard of health education and alert medical personnel a large number of people harbouring brain tumours are apt to be undiscovered.

In the Sudan there used to be no facilities for either neuro-radiological investigations or neuro-surgical procedures, and brain tumour suspects were sent abroad (usually to Egypt) for care. The Ministry of Health in the Sudan has established facilities for a neuro-surgical unit, thus providing fundamentally for the detection and treatment of tumours of the nervous system.

In this paper fourteen cases are presented of intracranial meningiomas in Sudanese patients who were cared for jointly in the Neurosurgical facilities of Professor Benhawi of the Ain Shams University, Cairo, Egypt. Seven of these patients were seen in the period May 1964–August 1966 and seven in the period February 1970–February 1971. The first group were seen in Maadi Neuro-surgical Centre and the second group in Gamhouria Hospital, Cairo.

The following are cases summaries.

Case No. 1

A lady of 30 was complaining of headache, left hemiparesis and deterioration of vision of 3 years' duration. Angiography disclosed a right parietal tumour which was operated upon and found to be a huge convexity meningioma.

The patient improved steadily after the operation.

Case No. 2

A man of 28 was complaining of weakness in the left arm and leg with a swelling in the

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head and had also suffered from epileptic fits for 2 years, and lately had developed deterioration of vision. Carotid angiography disclosed a large para-sagittal tumour which on operation turned out to be meningioma. The tumour was removed almost completely and the patient had a smooth recovery.

Case No. 3

A lady of 30 had suffered from headache, deterioration of vision and attacks of loss of consciousness for 11 months. Right carotid angiography showed a large fronto-temporo-parietal meningioma which was totally removed—but due to excessive bleeding the blood pressure continued to drop and the patient died shortly after the operation.

Case No. 4

A 60-year-old man had suffered from headache, blindness, and inability to walk for 4 years. Right carotid angiography showed tumour blush in the sub-frontal region extending to the middle fossa, a huge sphenoid wing meningioma was removed and the patient pulled through in the first post-operative days, but developed lung collapse and died on the 12th day.

Case No. 5

A 45-year-old lady had headache, deterioration of vision and weakness of the left side of the body. Angiography disclosed a right parietal para-sagittal tumour. The tumour was removed and the patient discharged ambulant.

Case No. 6

A 45-year-old lady was complaining of left proptosis and loss of vision which was preceded by headache of 3 years. Left carotid angiography showed a dilated ophthalmic artery and the pericallosal artery was pushed backwards. The tumour was removed with part of the roof of the orbit. It was a sphenoid ridge meningioma and the patient had an uneventful recovery.

Case No. 7

A 31-year-old man was suffering from blindness, generalized fits, mental manifestations and left proptosis. Left carotid angiography showed a mass in the floor of the anterior fossa with involvement of the orbit. An operation was carried out under hypothermia and massive transfusion. The tumour and the involved bone were removed. However, the patient remained in coma and died of respiratory arrest a few hours after the operation.

Case No. 8

A female patient aged 23 was suffering from headache, vomiting and epileptic fits involving the right side of the body. A left carotid angiogram disclosed a left frontal tumour. At operation, a left frontal convexity meningioma was removed. The patient had an uneventful recovery.

Case No. 9

A female patient aged 30 presented with sign and symptoms of IIP. Plain X-ray showed

bone thickening in the left side and left carotid angiography showed a partial meningioma which was removed.

Case No. 10

The patient was a man aged 42 with symptoms and signs of raised intracranial pressure of long duration. Angiography showed a huge supra-sellar tumour which was totally removed and proved to be a meningioma. The patient succumbed after the operation.

Case No. 11

A male patient aged 45 was having epileptic fits and right hemiparesis. Left carotid angiography disclosed a left parietal para-sagittal tumour which was removed with part of the dura and bone and the patient improved.

Case No. 12

A male patient aged 40 was suffering from temporal lobe epilepsy. Right carotid angiography showed a temporal lobe tumour. It was a basal meningioma which was totally removed. The patient remained unconscious after the operation and died.

Case No. 13

A female aged 25 was suffering from headache. Physical examination revealed left anosmia and angiography showed a left sub-frontal tumour. Frontal lobectomy was done during which the patient died from cardiac arrest.

Case No. 14

A young male of 20 was blind and hemiplegic, and angiography showed a left frontal falx meningioma which was removed and the patient recovered.

DISCUSSION

'With the possible exception favourable to the Negro, meningiomas have no respect for race.' This is the conception of Cushing about meningiomas. Cushing (Cushing & Eisenhardt, 1938) believed that trauma is of aetiological significance in meningiomas.

Choi, Schuman & Gullen (1970) in their case-control study in Canada found that 'a familial aggregation of brain tumours was observed among relatives of the study subjects for total verified tumours'. If such familial aggregation does indeed exist, the explanation may involve either a genetic or an environmental mechanism.

Analysing the described cases, it is worthy of note that all were supra-tentorial and of these 5 were basal, i.e. over 33%. If trauma is an aetiological factor all would have been in the convexity rather than at the base, as it is well protected. The majority (eight) we found in the age group 20-30 and five in the age group 40-50 and only one above the age of 50. They were situated mainly in the parietal (six) and frontal (five) regions, which are to some extent silent. Knowing that meningiomas grow slowly, it seems that they start at a very young age, which may suggest possible genetic or environmental factors.

It could be said that race has little to do with the genesis of meningiomas and that we still need to know its true aetiological factors.

Comparing this group of cases with other CNS tumours and taking into consideration that other Sudanese patients with meningiomas are in other countries (e.g. U.K.) and also that some cases pass undiagnosed, it would appear that the incidence of meningiomas in the Sudan is high.

REFERENCES

- CHOI, N.W., SCHUMAN, L.M. & GULLEN, W.H. (1970) Epidemiology of primary central nervous system neoplasms. II. Case—control study. *Amer. J. Epidemiol.* **91**, 467–485.
- CUSHING, H. & EISENHARDT, L. (1938) *Meningiomas. Their Classification, Regional Behaviour, Life History and Surgical End Results*. Charles C. Thomas, Springfield, Ill.

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