ORIGINAL ARTICLE

Incidence of Supratentorial Metastatic Tumors Study of 20 Cases

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ABSTRACT

Objectives: *To determine the incidence of supratentorial metastatic Tumors in Balochistan.*

Material and Methods: *Twenty (20) cases of both gender and different age group included in the study. This study was conducted at Neurosurgery Department, BMCH, Quetta from May 2010 to July 2014. Infratentorial metastases were not included in the study.*

Study Design: *Prospective and Analytic Study.*

Results: *Twenty patients of both genders were included in the group. The 12 patients were female and 8 male, age of patients range from 20 years to 65 years. The majority of patients were between 35 to 60 years. Debulking of tumor were done in 8 patients while Biopsy taken from the rest of the patients.*

Conclusion: *Metastatic brain tumors usually occur in adults. Previously the diagnosis was very late, but now a days due to the availability of modern technology the diagnosis made early.*

Keywords: *Metastatic tumors, supratentorial tumors, Debulking, Brain tumors.*

INTRODUCTION

Brain metastasis is the major cause of morbidity and death in patients with cancer.[1] Approximately 30% of all patients with metastatic epithelial cancer have symptomatic brain metastasis and autopsy data indicate that approximately 50% of patients who die of cancer have intracranial metastatis.[2] This figure can be expected to increase due to several factors among which are increased of lung cancer.[3] More sophisticated diagnostic tools and prolong survival of patients with cancer, Brain metastasis whether single, multiple or distinguished amongst the different parts of the brain. They are usually of three basic types:

Metachronous The primary source is successfully controlled, and takes months to an year appear at a distant site.

Precocious The metastasis is the 1st sign of cancer and primary is not found, and

Synchronous: metastasis and the primary cancer present simultaneously.[4]

The minimal diagnostic procedure includes Chest X-ray, Bone Scan and Imaging study like CT/MRI to verify suspected metastasis.[5]

MATERIAL AND METHODS

The study was conducted in the Neurosurgery Department of Bolan Medical College, Quetta from May 2010 to July 2014. The duration of study was four years and two months.

The objective was to determine the incidence of supratentorial metastatic tumors in Balochistan region.

RESULT

Twenty (20) patients of both gender and all age groups were included in the study. Male to female ration: 12 (Female) and 8 (Male).In the current study, all age groups included. Most of the patients were in there 3rd

Table 1:

S. No.	Gender	Number of Patients	Percentage
1.	Male	08	40%
2.	Female	12	60%

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to 4th decades of life. The CT and MRI were done in all patients.

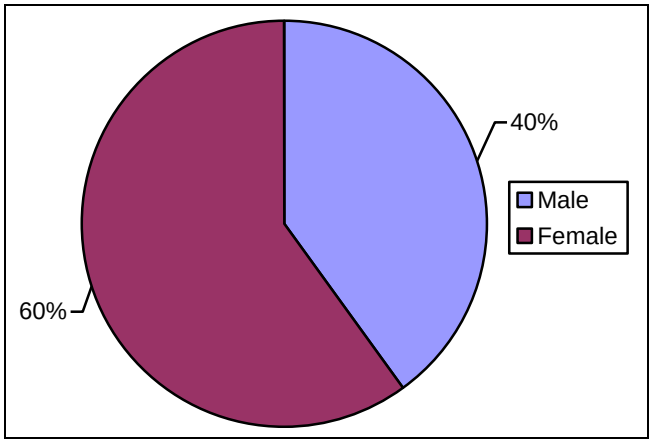

Fig. 1: *Gender Distribution.*

Table 2: *Age.*

S. No.	Age Group (Years)	No. of Patients	Percentage
1.	20 – 30	02	10%
2.	30 – 40	05	25%
3.	40 – 50	07	35%
4.	50 – 60	04	25%
5.	60 – 70	02	10%

Table 3: Location.

S. No.	Region Involved	No. of Patients	Percentage
1.	Frontal Lobe	03	15%
2.	Temporal Lobe	10	50%
3.	Parietal Lobe	06	30%
4.	Occipital Lobe	01	5%

Both hemispheres were involved in 2 cases. All patients were operated. Debulking was done in patients in whom the tumor was located superficially and causing pressure affected to the opposite side while in 11 patients, the biopsy was taken in whom the tumor was small and deep seated.

Table 4: *Operative Procedure.*

S. No.	Debulking Patients	Biopsy Patients
1.	09 (45%)	11 (55%)

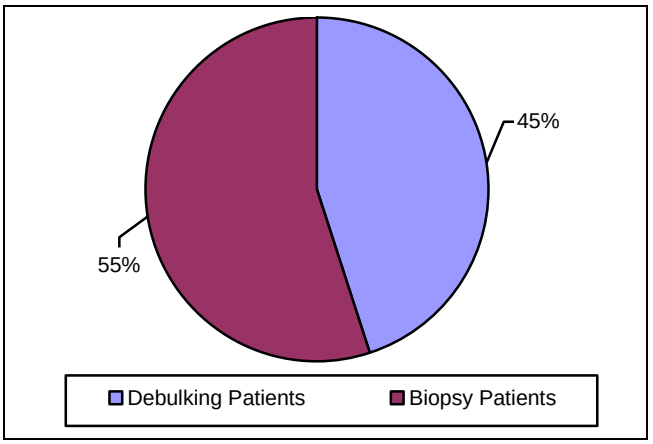

Fig. 2: *Operative Procedure.*

Left side was involved in 8 patients while, the right side was in 12 patients.

Table 5: *Side Involved.*

S. No.	Side Involved	Number of Patient	Percentage
1.	Right Side	12	60%
2.	Left Side	08	40%

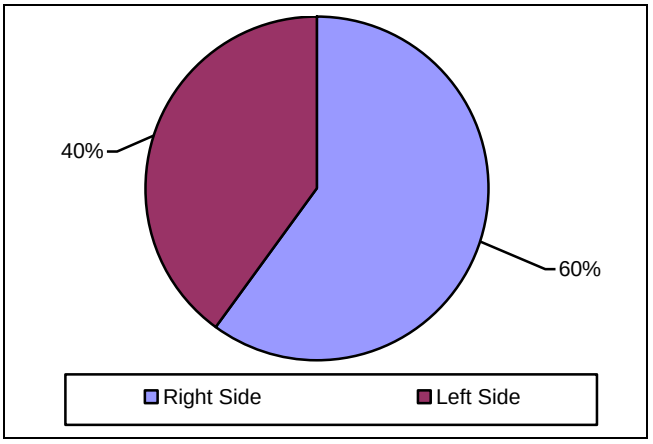

Fig. 2: *Side Involved.*

Histopathology was done in all patients, lung cancer was found to metastatic in brain in majority of patients.

Table 6: *Histopathology.*

S. No.	Primary Site	No. of Patients	Percentage
1.	Lung Cancer	8	40%
2.	Breast Cancer	4	20%
3.	Colon	2	10%
4.	Kidney	1	5%
5.	Thyroid	1	5%
6.	Primary source not found in	4	20%

DISCUSSION

Brain metastasis occur when cancer cells spread from their original site to the brain, but the sites most likely to cause brain metastasis are lung, breast, colon, kidney and melanoma.Brain metastasis occurs in 10-30% of adults with cancer. As the metastatic brain tumors grown, they create pressure on and change the function of surrounding brain tissue.

Brain metastasis can cause many signs and symptoms. Treatment for people whose cancer has spread to the brain is often surgery, radiation therapy or both. In some cases, chemotherapy and immune therapy are helpful.

Brain tumor symptoms vary depending on tumor size, number, location and rate of growth. Sign and symptoms include headache are rarely reported. Following are some sympotos: mental changes, seizure, dizziness and mental weakness etc.

In our study the primary site was identified in 16 (8%) cases and in 4 cases the primary site was not identified, but in other series this percentage is 10%. This might be because of early presentation of patients.[5]

In our study the lung cancer metastasis was the most common and breast cancer was second most which is similar in most of the study.[6]

In our series there was not a single case of melanoma, but in most of series melanoma is found.[7] It might be due to size because we had only 20 cases as compared to other series. Temporoparietal regions were commonly involved in most of the series and the same was observed in our study.[8] In our series the age, sex as same ratio as in other.[9]

CT and MRI brain done in all patients. Both hemisphere were involved in 2 cases, in which one patient was known case of Bronchogenic carcinoma and other was Ca Breast. Left temporoparietal are being involved in majority of cases, which is same in other studies.[10]

CONCLUSION

Metastatic brain tumors are usually occurring in adults and the diagnosis is very late, but due to modern tools of investigation most of the patients diagnosed early. Incidence is high in the lungs and breast cancer.

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