ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
Index Copernicus Value: 49. 23

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 3, Issue –4, July - 2018, Page No. : 156 - 158

Role of MRI in Haemorrhagic Intracranial Neoplasm

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Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Background- Brain Hemorrhage from an intracranial tumor is a well-recognized entity.During the past few years MR imaging has emerged as superior to CT in detecting intraparenchymal hemorrhage, particularly in the subacute and chronic phases.

Methods- This prospective study was conducted in 35 patients during the period of one year and patients fulfilling inclusion and exclusion criteria was included in the study and was include data collection, data organization, presentation, data analysis and data interpretation.

Results- 8 of the patients had primary tumors and 22 had metastatic tumors. Pathology was obtained in all 8 patients with primary tumors and in 22of the patients with metastases. The primary tumors included 3 gliomas, 3 meningiomas, an ependymoma, and a primary meningeal melanoma.

Conclusion- We found that the MR patterns that characterize hemorrhagic intracranial neoplasms should help to determine the cause of the hemorrhage.

Keywords- Hemorrhagic, Neoplasms, Intracranial.

Introduction

Brain Hemorrhage from an intracranial tumor is a well-recognized entity.During the past few years MR imaging has emerged as superior to CT in detecting intraparenchymal hemorrhage, particularly in the subacute and chronic phases. In addition, it is an excellent, noninvasive way to screen for, and follow, intracranial neoplasms. In patients who present with a hemorrhage on MR , however, it may be necessary to determine the underlying cause of hemorrhage. Recently, several reports have described the MR characteristics of intraparenchymal hemorrhage[1-5]. However, only a few studies describing the MR characteristics of hemorrhagic neoplasms have been reported in the literature [6-7]. Therefore, we examined patients with hemorrhagic neoplasms to determine whether there were any differences in the appearance of the lesions on MR that would distinguish them from pure hemorrhage.

Material and Methods

Study area – department of radiodiagnosis S.M.S.medical college and associate group of hospitals Jaipur.

Study population–This study was carried on patients referred to Dept. of Radio-diagnosis from OPD for MRI evaluation of haemorrhagic intracranial neoplasm.

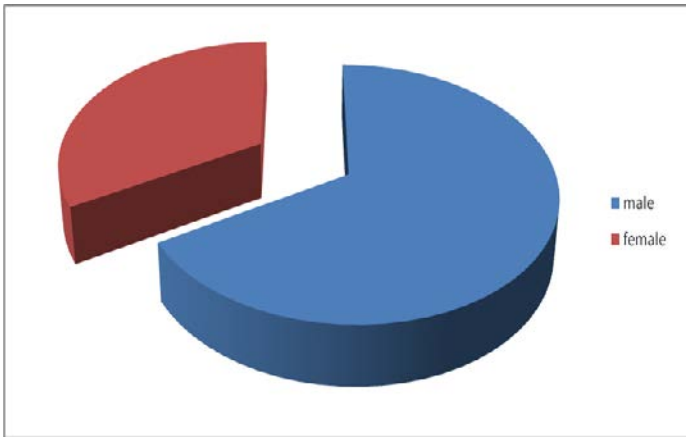
Sample size and Study duration–This prospective study was conducted in 30 patients during the period of one year and patients fulfilling inclusion criteria was included in the study and was include data collection, data

organization, presentation, data analysis and data interpretation.

Results

We found that hemorrhagic neoplasms undergo changes in their appearance that can be categorized into three distinct intensity patterns. These intensity patterns, however, are only somewhat time-dependent in that they do not always correlate with the clinical time course of the neoplastic hemorrhage, as they do with pure hemorrhage. The conventional terms used to describe the age-related signal intensity patterns of pure hemorrhage-i.e., acute, subacute and chronic-are not really appropriate when referring to neoplastic hemorrhage, because the time of evolution of the latter is variable. Therefore, rather than using the conventional nomenclature, which may be misleading, we defined the intensity patterns of our lesions as stages 1,2, and 3.

There were 20 men and 10 women, ranging in age from 20 to 70 years old.



Sex wise distribution of patients

Table no.1. pathology of lesion

Pathology	No. of patients	Percentage
Primary	8	22.67
Secondary	22	63.33
Total	30	100

8 of the patients had primary tumors and 22 had metastatic tumors.

Table no.2. Type primary lesion

Lesion	No. of patients	Percentage
Gliomas	3	37.50
Meningiomas	3	37.50
Ependymoma	1	12.50
Primary meningeal melanoma	1	12.50
Total	8	100.00

Pathology was obtained in all 8 patients with primary tumors and in 22of the patients with metastases. The primary tumors included 3 gliomas, 3 meningiomas, an ependymoma, and a primary meningeal melanoma.

Discussion

The incidence of intracranial hemorrhage resulting from neoplasm has been reported to range from 1-1 4% depending on the series [8-9]. Factors that affect the incidence include the source of the clinical information (surgery vs autopsy), the type of neoplasm (primary vs secondary), and whether the patient is symptomatic [8]. Of the primary intracranial neoplasms, hemorrhage occurs most frequently in relation to pituitary neoplasms [9]. Other primary tumors that have been reported to bleed include glioblastoma multiforme, lower-grade gliomas, ependymomas, choroid plexus papillomas, sarcomas, and meningiomas. The incidence of hemorrhage in metastatic neoplasms is highest in melanoma, hypernephroma, bronchogenic carcinoma, and choriocarcinom[10].

Conclusion

We found that the MR patterns that characterize hemorrhagic intracranial neoplasms should help to determine the cause of the hemorrhage.

References

1. Dooms GC, Uske A, Brant-Zawadzki M, et al. Spin-echo MR imaging of intracranial hemorrhage. Neuroradiology 1986;28 : 132-138

2. Di Chiro G, Brooks RA, Girton ME, et al. Sequential MR studies of intracerebral hematomas in monkeys. AJNR 1986;7: 193-199
3. Sipponen JT, Sepponen RE, Sivula A. Nuclear magnetic resonance (NMR) imaging of intracerebral hemorrhage in the acute and resolving phases. J Comput Assist Tomogr 1983;7 :954-959
4. Zimmerman RA, Bilaniuk l T, Grossman RI , et al. Resistive NMR of intracranial hematomas. Neuroradiology 1985;27 : 16-20
5. Swensen SJ, Keller Pl, Berquist TH , Mcleod RA, Stephens DH. Magnetic resonance imaging of hemorrhage. AJR 1985;145:921-927
6. Edelman RR, Johnson K, Buxton R, et al. MR of hemorrhage: a new approach. AJNR 1986;7:751-756
7. Cohen MD, McGuire W, Cory DA, Smith JA. MR appearance of blood and blood products: an in vitro study. AJR 1986;146: 1293-1297.
8. Mandybur TI. Intracranial hemorrhage caused by metastatic tumors. Neurology 1977;27: 650-655
9. Weisberg LA. Hemorrhagic primary intracranial neoplasms: clinical-computed tomographic correlations. Comput Radio/1986;1 0: 131-136
10. Weisberg LA. Hemorrhagic metastatic intracranial neoplasms: Clinicalcomputed tomographic correlations. Comput Radio/1985;9: 1 05-114