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Leptomeningeal metastasis mimicking Chronic Subdural Hematoma

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Abstract: The presentation of Leptomeningeal Metastasis varies widely. It can also present a condition very similar to Chronic Subdural Hematoma. One should have a low threshold for suspicion while diagnosing such conditions to avoid catastrophic events.

Introduction

Chronic Subdural Hematoma is one of very common neurosurgical disorder. It usually involve older age group people. The management involves NCCT head followed by surgery. We encounter a similar patient whose NCCT is almost diagnostic for Chronic SDH but on detailed examination it was found to be leptomeningeal metastasis from breast.

Case

A 45 year old female came to outpatient department with complaints of headache, giddiness on walking and cognitive impairment. The NCCT head (Figure 1) is suggestive of hypodense collection in rt frontotemporoparietal region along with the mass effect and midline shift to the right. On first instance it was considered to be a case of chronic SDH but disproportionate edema and mass effect raised a suspicion. On detail reexamination there was a small area of induration found at right breast. Patient was subjected to Magnetic resonance imaging and biopsy of indurated part. The MRI revealed a

leptomeningeal metastasis (figure 2) probably originating from breast malignancy which is confirmed by local tissue biopsy (adenocarcinoma).

Patient was transferred to oncology care where she was managed by surgery, chemotherapy and radiotherapy but she succumbed to her illness on 30th day of first consultation.

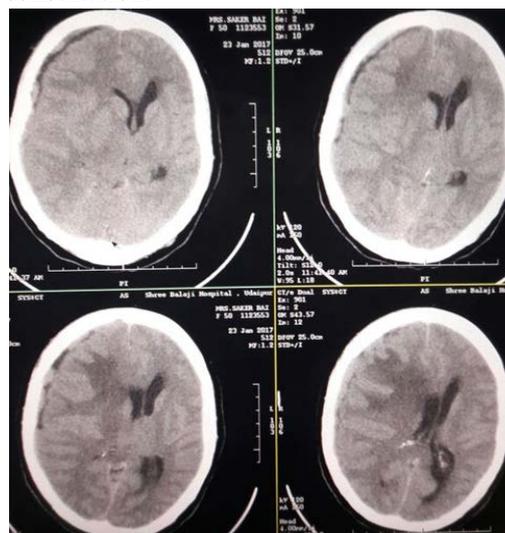


Figure 1 - NCCT head the right frontoparietal mass resembling Chronic SDH with Cerebral oedema

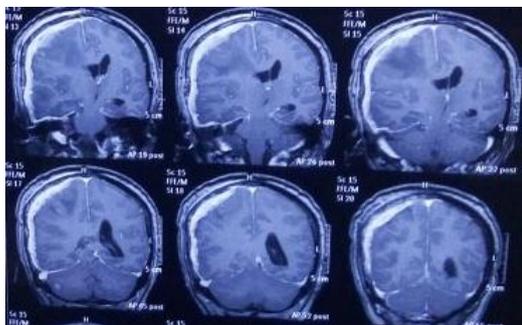


Figure 2 - MRI Brain Contrast image deciphering Leptomeningeal disease

Discussion

Though Chronic SDH and Leptomeningeal metastasis looks similar in imaging they are altogether different pathology. As per the biggest review article on Chronic SDH by Yadav et al the annual incidence is variable in different age groups but overall falls in the range of 1-5.3 per 100,000 population (1). The incidence increases when we consider population on anticoagulants, older age and other co-morbid illness. (1, 2, 3). The chronic SDH being the commonest neurosurgical illness the leptomeningeal metastasis is very rare. Though the autopsy series claim up to 20% of metastatic death. The incidence is about 5% of all metastatic cancers patients (4, 5, 6).

The Chronic SDH is benign condition with mortality is less than 2% while the leptomeningeal disease is associated with almost 100% mortality (6, 7, 8).

The great difference in these two disease makes it necessary to diagnose exactly the pathology. This case report is basically emphasized the similarity of two altogether

different pathology on NCCT head, so much that one can misdiagnose the leptomeningeal disease as chronic SDH and end up in catastrophic results.

Author recommends that every case of chronic SDH should be correlated with thorough clinical examination and least suspicion threshold. The doubts should always be ruled out by appropriate investigation i.e. Contrast MR imaging.

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