ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 16, Issue, 01, pp.27011-27014, January, 2024
DOI: https://doi.org/10.24941/ijcr.46727.01.2024

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

MULTIPLE INTRACEREBRAL HEMORRHAGE AS FIRST PRESENTATION OF METASTATIC CHORIOCARCINOMA: A CASE REPORT

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ARTICLE INFO

Article History:
Received 19th October, 2023
Received in revised form
18th November, 2023
Accepted 15th December, 2023
Published online 30th January, 2024

Key words:
Gender, Family Education,
Social Représentations.

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ABSTRACT

Metastatic brain tumors are the rare cause of intracerebral hemorrhage in the young. In this case, we present a case of a 23-year-old woman presented to emergency department with history of recurrent vomiting,sudden fall and loss of consciousness. she had past history of incomplete abortion 9 month back, history of pain abdomen and irregular vaginal bleeding last 6months.Computed tomography head showed multiple intracerebral hemorrhagewith midline shift. Chest X ray show multiple nodular opacity in bilateral lungs. CECT abdomen and pelvis revealed of heterogenous enhancing soft tissue density mass in pelvic cavity with non-separate visualization of bilateral adnexa with extension, involvement and deposits suggestive of choriocarcinoma with metastasis to lungs and brain. This patient responded well with combined treatment osmotic diuretics,antiepileptics, antibiotics and combination of chemotherapy and radiotherapy.This is a rare phenomenon of intracerebral hemorrhages secondaries to brain from choriocarcinoma. The better knowledge of this entity would facilitate earlier diagnosis and improve the outcome.

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Citation: Dr. Meena, R. L., Dr. Hemant Kumar Rajpurohit, Dr. Ashok Kumar Yadav, Dr. Gaurav Meena Dr. Jeetram Jat, Dr. Hemlata Meghwal and Dr. Shailendra Gupta., 2024. *"Multiple Intracerebral hemorrhage as first presentation of metastatic choriocarcinoma: A case report". International Journal of Current Research, 16, (01), .27011-27014.*

INTRODUCTION

Choriocarcinoma is the most malignant type of gestational trophoblastic neoplasia. Brain metastasis is the main cause of death and disability in choriocarcinoma patients. Brain metastasis of choriocarcinoma easily invades the vessel wall to form microaneurysms, so we have reason to believe that multiple intracerebral hemorrhage is related to neoplastic intracranial microaneurysms. Intracerebral hemorrhage (ICH) in the young is usually caused by arteriovenous malformations and aneurysms. Metastatic brain tumors are not frequently the cause. Among them, lung cancer, melanoma, and choriocarcinoma are most frequently quoted for their tendency to hemorrhage[1]. With an incidence of 1-9.2 in 40,000 pregnancies[2], choriocarcinoma is the most malignant tumor of gestationaltrophoblastic neoplasia (GTN) derived from any form of previously normal or abnormal pregnancy[3]. It grows rapidly and metastasizes to the lung, liver, and, less frequently, to the brain[4].Brain metastasis is the main cause of death and disability in choriocarcinoma patients. If the metastatic tumor is disrupted during the growth process, tumor hemorrhage, invasion of the surrounding brain tissue, intracranial hematoma, or subarachnoid hemorrhage may occur, which can be life-threatening[5]. Here, we report a case of brain metastasis of choriocarcinoma that caused multiple cerebral hemorrhages.

CASE VIGNETTE

20-year-old femalepresented in medical emergency department with complaint of headache, vomiting and loss of consciousness from 1 day.Past history suggestive of incomplete abortion(1st trimester) 9 month back and history of irregular vaginal bleeding,lower abdomen pain(dull in nature)from 6months. After hospitalizationpatient gained consciousness but experienced frequent vomiting. her vital was normal. pupils were equal in size, with sensitivity to light. Thenshe complained of a stabbing pain

in the neck.No history of head trauma, Any medication,fever and seizure. systemic examination revealedincrease tone in all fourlimbs, muscle power reduced (grade 3/5), DTR brisk with bilateral planter extenso. per abdomen examination was unremarkable. gynecological evaluation done that suggestive of no active bleeding. On routine Investigations, Hb-9.1gm%,TLC-9000/microliter,platelets wereadequate, ESR 24mm/1hr, urine microscopy revealed microscopic hematuria and pus cells. thyroid profile, lipid profile was normal, thenwe planned connective tissue disorder profile dsDNA,ANA, APLA IgM &IgG antibody that was negative.HIV and hepatitis serology wasnegative.serum betahuman chorionic gonadotropin (beta-hCG)>10000m IU/ml.X ray chest suggestive of bilateral multiple nodular opacities. NCCT HEAD (Fig.1) suggestive of multiple hemorrhages in the right temporal-parietal and occipital lobe,right lateral ventricle compression, and midline shift and linear hyperdensein left parietal lobe suggestive of SAH.

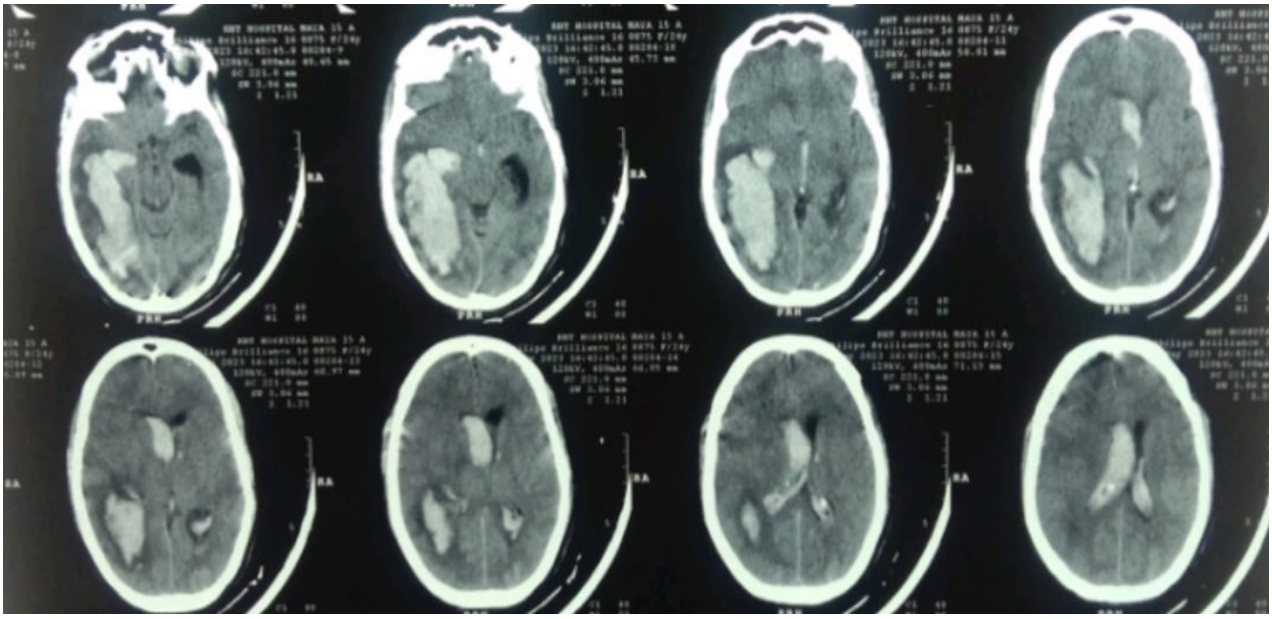

Fig.1. NCCT head multiple hemorrhage in right temporal-parietal and occipital lobe with midline shift

MRI BRAIN(fig.2) was done that suggestive of the multiple bleeding sites, large altered signal intensity area measuring approx. 85×34×43mm in right parieto-occipital-temporal region and left frontoparietal region, andmass effect in the form of mid line shift of approximate 10 mm toward contralateral side and effacement of ipsilateral ventricles. similar lesion measure 22×15 mm seen in left frontoparietal region with multiple small foci of blooming seen in T1W image. cerebral angiogram suggestive of anterior cerebral artery microaneurysms.

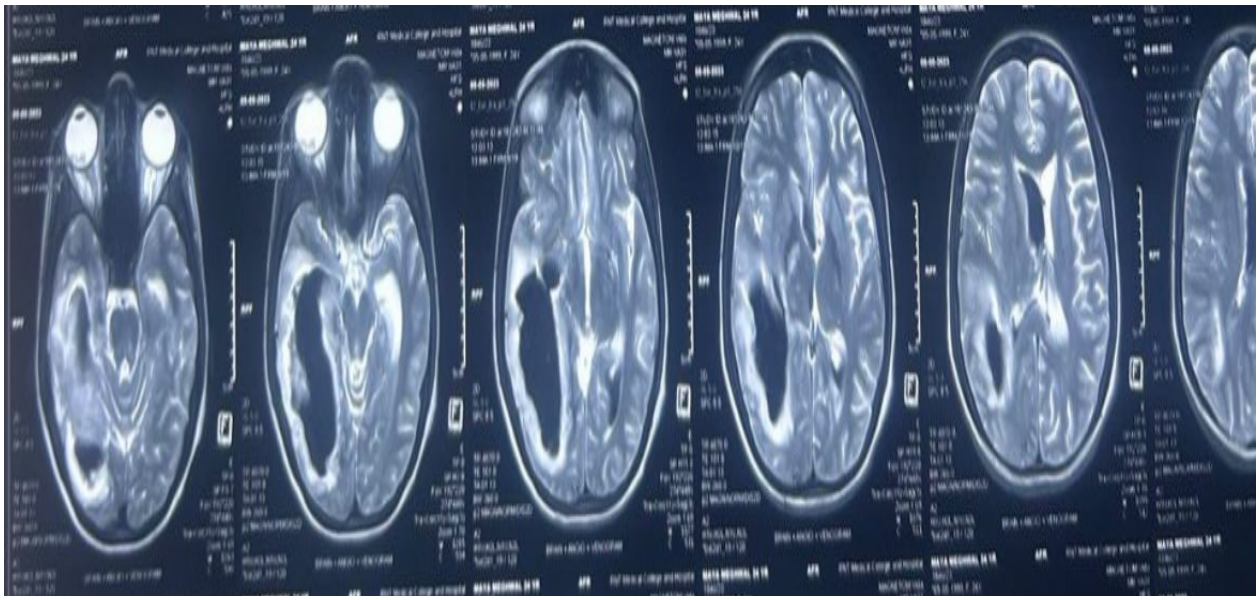

Fig.2 MRI brain: multiple intracranial bleeding in right parieto-occipital-temporal region and left frontoparietal region

CECT THORAX (fig.3)- Multiple nodular opacities of varying sizes are seen in both fields some of them are pleural based largest measuring approx. 23×17mm in right upper lobe of lung suggestive of metastasis

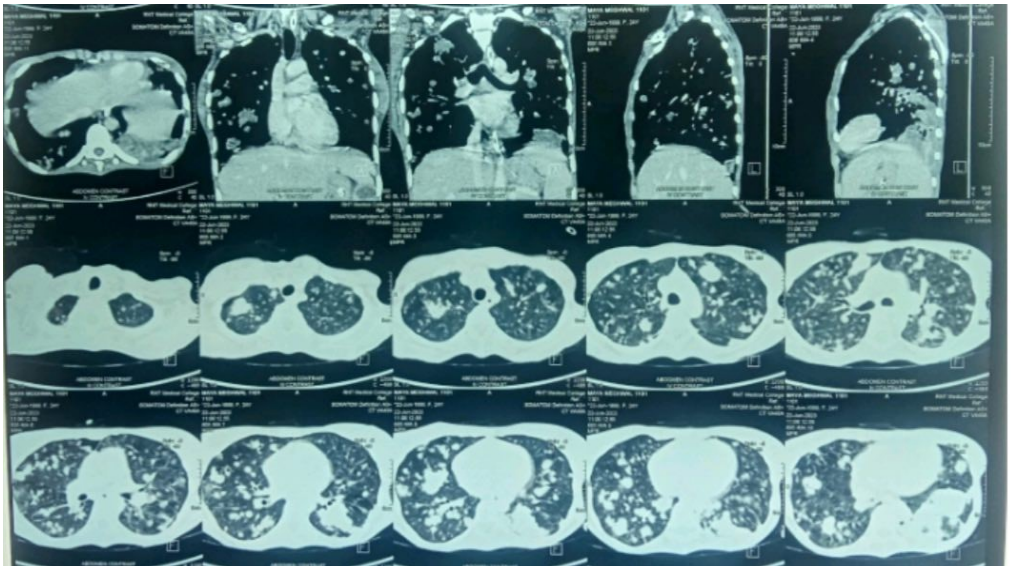

Fig.3 CECT THORAX: Multiple nodular opacities of varying sizes are seen in both lung fields

CECT ABDOMEN AND PELVIS (FIG.4) suggestive of heterogenous enhancing soft tissue density mass in pelvic cavity with non-separate visualization of bilateral adnexa with extensiveinvolvement and peritoneal depositssuggestive of neoplastic etiology.

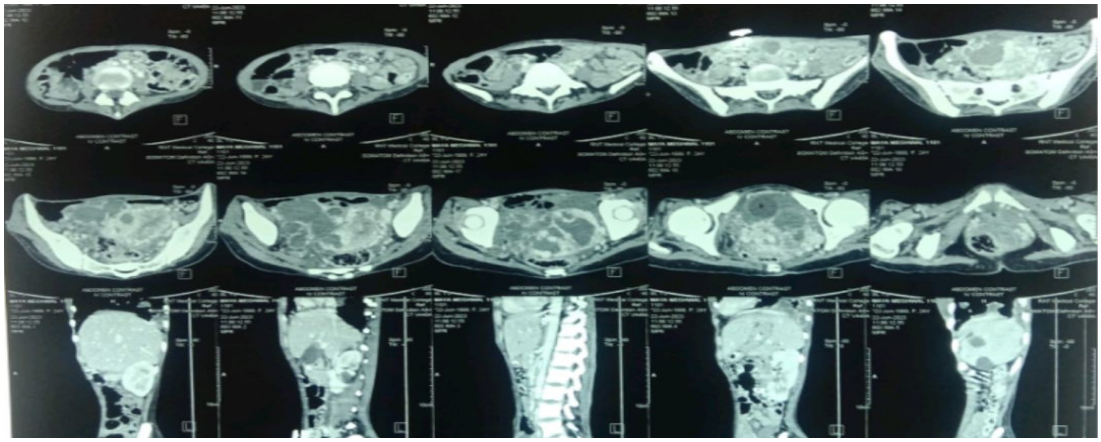

Fig.4 . Cect Abdomen And Pelvis:suggestive of heterogenous enhancing soft tissue density mass in pelvic cavity

DISCUSSION

Rapid hematogenous spread to multiple organs is characteristic of choriocarcinoma. Favored organs of involvement are the lung (94%) and vagina (44%), followed by the liver (28%) and brain (28%)[6] Choriocarcinoma develops from trophoblastic cells and is a highly malignant tumor. Metastatic choriocarcinoma must be treated as soon as possible because this tumor has a tendency to rapidly grow and hematogenous spread[7]. Treatment of metastatic choriocarcinoma using chemotherapy and/or radiotherapy produces long-term survival rates of as high as 80%. Despite the important improvements in treatment, patients affected by cerebral metastasis and oncotic aneurysms still have a poor prognosis[8] Because trophoblastic cells are highly proliferating and can replace vascular endothelial cells to form the vascular endothelial layer, they can easily invade the maternal blood and result in distant metastasis. Most deaths in choriocarcinoma patients are due to brain metastasis. we reported a rare case of brain metastasis of choriocarcinoma that caused multiple cerebral hemorrhages. The patient had a medical history of irregular vaginal bleeding and abdominal pain. Howevershe did not seek treatment until she developed lobar hemorrhage caused by brain metastasis. We originally considered occult vascular malformation and anterior cerebral artery aneurysm because the only hematoma change was observed in the imaging examinations. In women at childbearing age, metastatic choriocarcinoma must be considered in the differential diagnosis of ICH because the clinical and radiological presentations are multiple. It is very difficult to differentiate the imaging appearances from those due to cerebrovascular disease[9]. However, apart from clinical and radiological signs, the key diagnostic feature of choriocarcinoma is an elevated serum β-HCG [10]. Elevation of β-HCG in the serum of a patient with a history of normal or abnormal pregnancy suggests the diagnosis of choriocarcinoma Presented case managed with appropriate antibiotic, osmotic diuretics . patient well improved and thentransferred to radiation oncology department for combined chemotherapy and radiotherapy .

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