

Abducens Nerve Palsy as Initial Presentation of Burkitt's Lymphoma During Pregnancy Post-Cesarean Abducens Nerve Paresis and Headache

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Abstract

Burkitt's lymphoma is one of the most hematologic malignancies that involve the central nervous system. Our patient had a rare presenting symptom of lymphoma during pregnancy. It is reasonable to search for Burkitt's lymphoma in every patient with abdominal mass and neurologic symptom. Involvement of cranial nerves especially abducens are among this neurologic complications but are rare as presenting symptoms of lymphoma.

Keyword: Abducense nerve, Pregnancy, Burkitt's lymphoma

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A 20 year old pregnant woman was admitted to the emergency department at 33 weeks of gestation due to oligohydraminous. The patient had no record of her previous prenatal visits. She gave a vague history of fever night sweats during her second trimester. Results of her laboratory tests at admission are shown in Table 1.

Ultrasonography of the abdomen performed the next day, revealed no specific abnormal findings.

Cesarean was performed with no complications and the patient was discharged from the hospital. Ten days later were appeared new onset headaches and diplopia, and she was admitted in the neurology department. On neurologic examination the patient was awake, alert and oriented to time and place and person. Her naming repetition reading and calculation abilities were all good. There was normal muscle bulk and tone with full strength in both arms and legs. Proprioception and sensation of touch and vibration were normal Deep tendon reflexes were normal in both arms and knees. Plantar responses were flexor bilaterally. No focal

neurologic symptoms were observed. No signs or symptoms in favor of meningitis all her cranial nerves were examined and were normal except for her left Abducens (CN VI) Nerve.

Due to her CN VI paresis and new onset headaches, localized in her temporal region, brain magnetic resonance imaging (MRI) was done which showed no specific pathologic lesions (Fig.- 1, A).

During the patients neurologic examination the patient- was Restless and was clutching her abdomen. Abdominal examination revealed localized pain around the patient umbilicus which shifted to her right lower Quadrants in less than 2 hours. RLQ examination showed tenderness with no rebound tenderness. No organomegaly or masses were detected .An abdominal sonography was done which revealed a mass and free fluid in her abdominal. The patients computed tomography showed intra pelvic hematoma and free fluid (Fig.- 1; B, C). The patient was taken to the operating room and laparotomy was preformed, which showed an inflated appendix and intra abdominal

Table-1. Lab datas at administration in gynecologic ward

RBC count	4.5
WBC	10×10 ⁹ /μL
Hb	10.4g/dl
Plat	150×10 ⁹ /μL
MCV	90 fl
Cr	0.8 mg/dl
AST	20 unit/l
ALT	25 unit/l
ESR	60 mm/2h

Table-2. Lab datas in administration of hematologic ward

WBC	23×10 ⁹ /μL
Hb	10 g/dl
Plat	80×10 ⁹ /μL
LDH	1000
HIV test	Negative
AST	30 unit/l
ALT	20 unit/l
CRP	+3



Fig.- 1. According to neurologic symptoms brain MRI obtained to rule out brain vascular and parenchymal lesions, normal brain MRI (A). To determine abdominal pain source abdominal CT-scan was obtained, huge abdominal mass after caesarian section were shown (B, C)

lymph nodes. The appendix was removed and biopsies from the lymph nodes were sent to pathology which confirmed the diagnosis of Burkitt's Lymphoma.

The patient was admitted in the hematology and oncology ward with the diagnosis of Burkitt's lymphoma. Her laboratory tests are shown in table 2. (Table 2)

During her admission in hospital routine laboratory tests and peripheral blood smear (PBS) and bone marrow aspiration plus analysis of CSF were done. In the PBS shifting to the left and the myeloblast cells plus toxic granulation was observed.

In the bone marrow aspiration more than 80% blast cells with cytoplasmic vacuoles were seen. The cytoplasm was also basophilic which is compatible with Burkitt's lymphoma.

In the analysis of CSF many lymphoblast cells were seen which is suggestive of meningitis as a result of BL/Biopsy of her abdominal lymph nodes during her surgery were sent for Immunohistochemistry which were ki67 positive in over 99% of cells.

The patient was treated with the CODAX/IVAC regimen in the hematology department and Abducens paresis resolved after 2 cycles of drugs.

Discussion

Cancer during pregnancy is a rare event and its prevalence is approximately in every 1000 births.(1)

Most commonly diagnosed cancers during pregnancy are breast cancer, cervical cancer, Melanoma, Hodgkin disease leukemia and Non-Hodgkin lymphoma. Burkitt's lymphoma during pregnancy is a very rare event and only 29 cases of BL have been reported between the years 1977 & 1998. Adnexal mass and Bilateral Breast masses during pregnancy are the usual clues that lead to consideration and diagnosis of BL during pregnancy.(2)

In 2006 Dr Lon reported 21 year old women with BL of head and neck diagnosed during her pregnancy.(3) In another study conducted by Ward, 75 cases of complicated pregnancies with NHL between the years 1937-1985 have been reported.(4)

Salvias studied reported 20 cases of bilateral breast infiltrations associated with hemotologic malignancies. He found BL in 75% of these cases and 70% of the BL diagnosed. According to the study, this hypothesis was brought up that hormonal changes and immunosuppression during pregnancy could be the basis of a more aggressive BL during pregnancy.(6-8)

Magloire et al presented a patient at 12 weeks of gestation with abdominal mass and tooth pain. The patient had adnexal mass in conjunction with head and neck symptoms which led to the diagnosis of Burkitt lymphoma (9). Also in another study Antic et al reported the diagnosis of clinical stage IV (B) Burkitt's like lymphoma with localization in the pleura, breast, bone marrow, uterus and adnexae.(10)

In a review article published in 2006 by Steiner a patient with the initial presentation of obstructive icterus was diagnosed with BL.

In this article 22 additional cases of NHL associated with pregnancy have been reported, 8th of them have been BL (11). The site of tumor in the cancer mentioned above is as follows:

- Breast (12-13)
- Cervical Lymph Nodes + and eyes (14)
- Breast, Mediastinum and adnexae (15)
- Breast liver, spleen, adrenal and GI (16)

Lowenthal has also reported a 32 year old pregnant women with BL (17-18). Bornkamm has reported a 34 years old pregnant woman with diffuse Burkitt(19). Armon also reported 2 cases of pregnant woman with Burkitt's lymphoma and adnexal masses (20). Fadiaro also described a 27 years old woman on week 28 of gestation with bilateral breast masses who was diagnosed with BL (21).

Kirkpatrick also diagnosed and reported a pregnant woman in her third trimester with BL. Her initial presentation was like most of the previous cases bilateral breast masses (22).

1. Burkitt's lymphoma with initial presentation of Abducens nerve paresis
2. Post – Cesarean headache and Abducens nerve paresis in a 33 year old.

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