Burkitt Lymphoma with Extra Dural Location: A Case Report and Literature Review

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Abstract:

This B-cell carcinoma, which originated from a clone of germinal center excrescence cells (CD5-, CD20-, and CD10), has a generally aggressive evolution. The Epstein-Barr virus (EBV) is associated with the so-called primitive form, and it extends all of Africa; it appears as a mandibular excrescence in young children. In a 10-year-old girl, we present a clinical example of burkitt's carcinoma localized in the brain. Using a pterional technique, the case had a major excrescence excision while under general anesthesia. For better care, the child was transferred to an oncology center.

Keywords: *Burkitt's lymphoma, cerebral localization*

Introduction:

Burkitt's carcinoma is a largely nasty B- cell carcinoma. It was first described in Africa, where it was called" aboriginal Burkitt carcinoma". When diagnosed in other corridor of the world, it's called" sporadic Burkitt's carcinoma"(4). Non-Hodgkin's tubercles comprise further than 100 different realities, with decreasingly precise natural characteristics that explain their extraordinary diversity in geste and prognostic, and bear decreasingly personalized treatments (3, 6).

The Epstein-Barr virus (EBV) is associated with the so-called primitive form (12), and it spans all of Africa (10, 11). It appears as a mandibular excrescence in young children (6, 9).

Case Report:

We report a clinical illustration of a cerebral localization of Burkitt's carcinoma in a 10-year-old girl. Clinically, she presented with a 20-day history of effortless left temporal lump and intracranial hypertension, with no substantiation of seizures or sensitive motor poverties.

Cerebral MRI revealed an extensive lesion centered on the left temporal bone, which was incompletely lysed, with irregular silhouettes measuring 56 x 48 mm **(Fig. 01)**, heterogeneously enhanced, and delineating a patch of necrosis on its endocranial side. It extended into the extra-axial space, pushing back the cerebral parenchyma **(Fig. 2).** **It** came into contact with the side wall of the left route thoraco-abdomino-pelvic CT checkup, showing bilateral pulmonary micronodules with 3 bilateral renal nodes **(Fig. 3).**

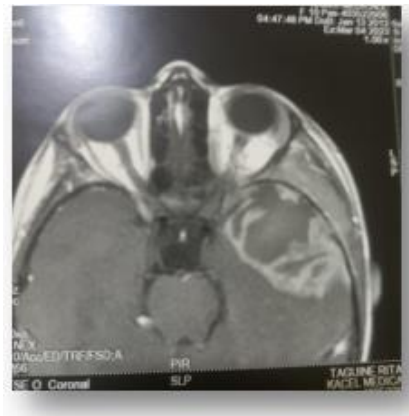
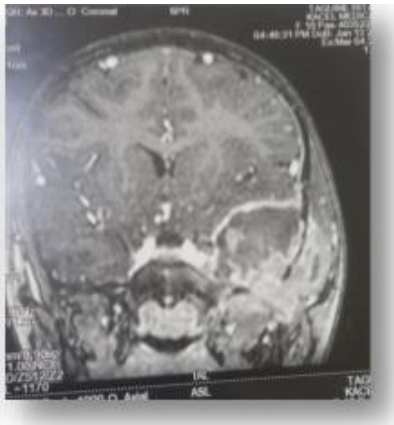


Fig : 01



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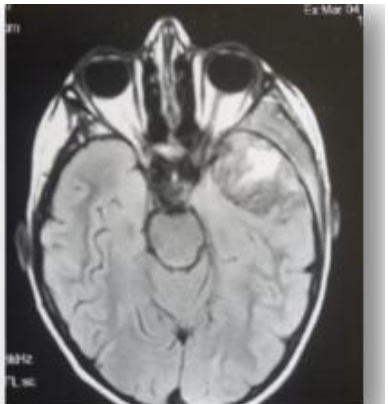

Fig : 03

MRI characteristics of brain lymphoma

(Fig 01). T1 MRI Left temporal lesion with irregular contours, heterogeneously enhanced in injected T1 **(Fig 02)**

(Fig 03).MRI flair sequence

The case underwent a large excrescence resection under general anesthesia using a pterional approach **(Fig. 4).** The frontotemporal bone delirium was made with a gigli saw through four joined drill holes, with milling of the external part of the pterion. The bone delirium was gently lifted, revealing the redundant dural process below without bone infiltration. Intraoperatively, a solid mass with little hemorrhage is set up, with a well-limited sanguine-white appearance. The excrescence volume is reduced by partial excision of the excrescence capsule, intra-tumoral debulking using suction, and bipolar coagulation.

Analysis of the excrescence capsule was continued on all sides, with coagulation of the dural excrescence spot. Disquisition of the subdural space didn't reveal any subdural excrescence process. At the end of the operation, the bone flap was replaced and the various planes closed. The evolution was favorable with the regression of the temporal swelling.

Anatomo pathological study revealed a morphological aspect and immunohistochemical profile of a **high-grade CD 20 B lymphoma** compatible with Burkitt's lymphoma. The child was referred to an oncology center.

The child was subsequently referred to an oncology center. MRI follow-up after 6 months showed no tumor recurrence **(Fig. 5).**

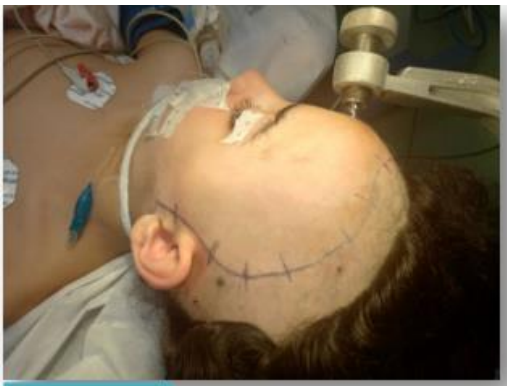

Fig : 04

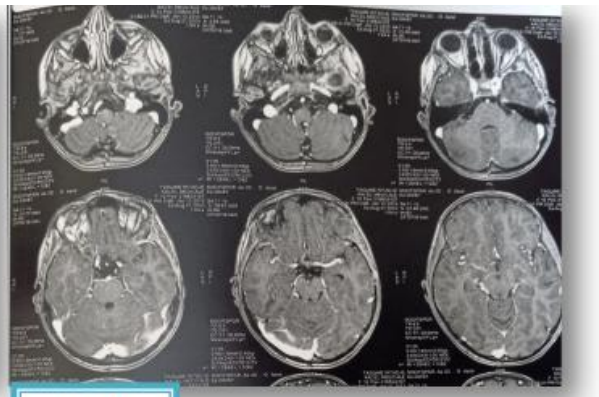

Fig : 05

Fig 04: installation of the patient in the operating room

Fig 05: Control MRI after 6 months

Discussion:

This is a B-cell carcinoma with a largely aggressive course, forming from a clone of germinal center excrescence cells (CD5, CD20, and CD10) (**7).** The so-called aboriginal form is linked to the Epstein-Barr contagion(EBV) (13) and is widespread in Africa. In youthful children (14), it manifests as an excrescence of the jaw.

The sporadic form accounts for 1–2 tubercles in Europe. It can affect both children and adults and frequently manifests itself as a fleetly enlarging abdominal mass. Bone gist and nervous system involvement aren't uncommon.

Surgery provides the material demanded for an accurate opinion, and treatment is grounded on repeated administration of high-cure IV methotrexate.

Treatment must be initiated fleetly, as these excrescences grow fleetly. Ferocious polychemotherapy with cyclophosphamide, vincristine, doxorubicin, methotrexate, ifosfamide, etoposide, and cytarabine(CODOX-M/IVAC) plus rituximab gives a cure rate of> 80 in children and > 60 in adults. For cases> 60 years of age (2), rules similar to rituximab plus etoposide, prednisone, vincristine(Oncovin), and doxorubicin(in acclimated R-time boluses) are also generally used with success. In cases without CNS metastases, CNS prophylaxis (e.g., with systemic and/or intrathecal methotrexate and/or cytarabine) is essential (2).

Radiotherapy is a connection or catch-up treatment used in certain centers, but it isn't without side effects, especially in people over 65 who can develop cognitive impairment fairly quickly. It's thus decreasingly recommended to avoid it, especially in cases where patients achieve complete absolution under chemotherapy and are potentially cured(around 50 percent of cases achieve complete absolution) (2, 5).

Prognosis:

In children, the chances of a cure are particularly high. In adults, carcinoma or excrescence has an intermediate prognostic value, with a standardized net survival rate of 73 at 1 time and 68 at 5 times.

Some studies observe a drop in 1-time net survival as a function of age, from 89 at age 20 to 28 at age 80 (16, 17).

Conclusion:

Cerebral carcinoma is a rare complaint, representing lower than 0.5 of all tubercles and lower than 2 of brain excrescences; it remains confined to the CNS, and its prognostic is fairly poor(30 survival at five times).

As far as possible, steroids should be avoided; a single cortisone injection may render the diagnosis impossible and lead to a second, distant surgical procedure to obtain a diagnosis.

Above all, the patient must be referred to a specialist immediately and without delay. The disease is aggressive, the kinetics are very rapid, and the symptomatology can worsen rapidly. and the initial management of the patient requires perfect coordination between neurosurgery, oncology, neuroradiology, and neuropathology from the outset in order to both obtain a diagnosis and rapidly relieve the patient.

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