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Obstructive Icteric Syndrome in a Patient with a History of Burkitt's Lymphoma

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ABSTRACT

The patient was a 16-year-old male with a history of Burkitt's lymphoma, stage III, diagnosed at 3 years of age and treated with chemotherapy, who presented with fever, productive cough, dyspnea not associated with exertion and altered state of consciousness. On physical examination, patient in regular clinical conditions, generalized icteric tinge. He presented paraclinical findings suggestive of icteric syndrome and an abdominal tomography that reported dilatation of intrahepatic and extrahepatic ducts, so the diagnosis of obstructive icteric syndrome was made. In the case presented, the etiopathogenesis of this patient's diagnosis can be explained by an extrinsic compression of the biliary tract due to a probable recurrence of the underlying pathology 13 years after his diagnosis.

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Introduction

Lymphomas are neoplasms of the lymphatic system that are classified into Hodgkin's lymphoma (HL) and non-Hodgkin's lymphoma (NHL) [1, 2]. NHL corresponds to the most frequent lymphoid malignant tumor worldwide, among them is the very aggressive B-cell Burkitt's lymphoma (BL), representing only 4% of all NHL [2]. BL predominates in children and young adults with a high mortality due to immunosuppression [3, 4]. Three clinical variants of BL are described: endemic, non-endemic and epidemic according to epidemiology, clinical presentation and genetic characteristics [1, 2]. Another classification describes it according to lymph node involvement in IV clinical stages [3]. It is characterized by rapid growth and extranodal predilection, generally abdominal in its endemic subtypes. Intra-abdominal findings range from intestinal infiltration to liver and pancreas, generating obstructive icteric syndrome (OIS) together with other clinical manifestations related to soft tissue infiltration, being unusual the asymptomatic icteric clinic [5, 6].

The diagnosis is made by means of a biopsy, as well as complementary laboratory tests and images such as X-rays, computed tomography of the thorax, abdomen and pelvis, depending on the location of the tumor [6]. First-line treatment includes chemotherapy and surgery for tumor removal [2, 5]. The aim of this research is to describe the obstructive icteric syndrome as a possible relapse clinic in a young patient with a history of Burkitt's lymphoma, after 13 years without medical treatment through the report of a case of BL grade III.

Case Presentation

16-year-old male, presenting clinical picture characterized by fever, cough with whitish expectoration, dyspnea not associated with exertion and altered consciousness. He refers stage III Burkitt type NHL diagnosed at 3 years old, treated with chemotherapy, without current treatment.

Patient in regular condition with generalized icteric tinge. Symmetrical chest, hypoexpansible, with abolished vesicular murmur in right hemithorax with crepitant aggregates. On neurological examination, patient with altered state of consciousness, somnolence type, and altered mental status, psychomotor agitation type. Sensitivity and language not assessable. Rest without alterations.

Laboratory tests reflect Hemoglobin: 12.1g/dl, Hematocrit 37%, Leukocytes: 22.000mm3 at the expense of lymphocytes, Platelets 118.000mm3. For this reason, the patient was admitted with the diagnoses of: Community Acquired Pneumonia, Burkitt's Lymphoma grade III with probable pulmonary and cerebral metastasis.

It is added, Total Bilirubin (BT): 14.32 mg/dl, Direct Bilirubin (BD): 7.45 mg/dl, Indirect Bilirubin (BI): 6.87 mg/dl, Alkaline Phosphatase (AF): 929. 00U/I, LDH: 375.00, gamma glutamyl transferase (GGT): 330.00U/I, glutamic oxaloacetic transaminase: 930.10U/I, glutamic pyruvic transaminase: 915.50U/I. Subsequently, an LDH control was performed: 791.80. In relation to these values, the diagnosis of Obstructive Icteric Syndrome is added: amylase, lipase, prothrombin time and partial thromboplastin time, glycemia, urea, creatinine, sodium, potassium, calcium, without alterations. HIV serology: negative.

He also presented a CT scan of the abdomen with contrast where there was evidence of intra and extrahepatic tract dilatation with conglomerates extending from the confluence of the right and left hepatic duct, common hepatic duct, common bile duct, common bile duct to its confluence in the pancreatic duodenum complex with multiple adenopathies at para-aortic level, without evidence of intra or extrahepatic gallstones. Then, a new control of laboratory tests was performed, which showed an increase in all values, with unsatisfactory evolution and subsequent death.

Discussion of Findings

As reported by Díaz J Burkitt lymphoma can be harmful due to its replication and growth, provided it is detected late [3]. However, by making an early diagnosis, treatment is effective, controlling its spread [3]. This patient presented sporadic Burkitt lymphoma. This was determined taking into account the epidemiology, clinical features and history of the case. The sporadic form is the most common variant worldwide and usually presents as an abdominal tumor but can affect other organs.

In 2021, Álvarez conducted a descriptive, retrospective study in which autopsies were performed on 593 deceased individuals with Non-Hodgkin Lymphoma, demonstrating that Burkitt's lymphoma only had a prevalence of 0.4% and the most frequent sites of metastasis are the liver, spleen, kidney and lung [7]. Metastasis is uncommon, which gives more significant importance to this review due to the probable metastasis that has occurred, because even if a biopsy is not available for confirmation, the history and clinical symptoms could suggest its presence.

Relapse is defined as the recurrence of lymphoma starting at any site after achieving remission [8]. The risk of relapse after the first year is less than 5% [9]. Computed Tomography (CT) is the method of choice for the diagnosis of Burkitt Lymphoma, along with the pathological study [2, 10]. Currently, statistical data on Burkitt lymphoma relapse are scarce due to its infrequency. The CT findings, the patient's clinical picture and history suggest that he had a relapse of Burkitt's lymphoma after 13 years without treatment.

The presence of obstructive jaundice secondary to pancreatic or hepatic hilum infiltration has been described in pediatric or HIV-infected patients [11]. Although the patient presented jaundice symptoms, his HIV serology was negative. The increase in SGOT, SGPT, GGT, FA and total bilirubin at the expense of direct, indicates the presence of an obstructive jaundice syndrome whose etiopathogenesis can be explained by extrinsic compression of the biliary tract of a probable recurrence of Non-Hodgkin Lymphoma.

Obstructive jaundice syndrome secondary to malignant neoplasms is common but is rarely caused by lymphomas [11]. Increased serum LDH levels have been described as a negative prognostic factor [10]. In this case, elevated LDH levels were present, which was important in determining the prognosis of our patient who died a few days after admission.

Conclusions

Burkitt lymphoma does not usually recur after such a long time. However, in this study, a possible relapse was evidenced in an adolescent, characterized by an obstructive jaundice syndrome. The presence of elevated LDH values and clinical symptoms suggest extrinsic compression of the biliary tract due to a probable recurrence.

Jaundice symptoms, although rarely described in the literature, are a manifestation of the progression of this disease. Therefore, it should be taken into consideration when considering a patient with such a history. Likewise, an approach with percutaneous external biliary drainage and continuation with chemotherapy could have reduced the patient's morbidity and mortality, so it could be considered for future cases.

Conflict of Interest

It is declared that there is no conflict of interest.

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