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CHOLESTATIC JAUNDICE AS A CLINICAL PRESENTATION OF HODGKIN'S LYMPHOMA IN A 20-YEAR-OLD SAUDI MALE PATIENT, A CASE REPORT

Gastroenterology

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ABSTRACT

Background: Hodgkin lymphoma (HL) represents approximately 10% of lymphomas and is curable in most, but not all, patients. It has a bimodal incidence, although it most commonly presents in young adults. Presentation with mediastinal, cervical, and supraclavicular involvement is particularly common for the nodular sclerosing subtype. Patients may also present with B symptoms, although that is more commonly seen in elderly patients with more advanced disease. Pruritus may also be a presenting symptom. The diagnosis is established with a lymph node biopsy specimen showing Reed-Sternberg cells, malignant cells that originate from germinal center B cells and are seen in an inflammatory infiltrate.

Case Report: We report a case of a 20 years old Saudi male presented to our emergency department with jaundice without clinical lymphadenopathy, accompanied with laboratory investigations that is showing intrahepatic cholestasis. The patient was admitted initially to evaluate the causes of jaundice that he has mainly by investigating hepatic and post-hepatic diseases. Months later, he has developed palpable lymphadenopathy. Surgical excisional biopsy result concluded that the patient is having Hodgkin's lymphoma.

Conclusion: Although it is thought to be an uncommon cause of intrahepatic cholestatic, lymphomas should be considered in evaluating a patient who came with similar presentation.

KEYWORDS

Hodgkin's lymphoma, Intrahepatic cholestasis, jaundice, vanishing bile duct syndrome.

INTRODUCTION:

Hodgkin lymphoma (HL) is one of the most common lymphomas in Western countries, with an annual incidence of about 3 cases per 100,000 people.[1]

It is characterized, histology wise, by the presence of rare tumoral cells, known as Reed-Sternberg cells, in a polymorph, inflammatory and reactive cell environment. Research in molecular biology has shown that the Reed-Sternberg cell is primarily derived from a post germinal B lymphocyte. Furthermore, Reed-Sternberg cells appear to contain characteristic antigen-presenting molecules.[2]

Hodgkin lymphoma is usually accompanied by supradiaphragmatic lymphadenopathy. Retroperitoneal and inguinal lymphadenopathy occur less frequently. Approximately one-third of patients present with constitutional symptoms. In addition to high fevers and drenching night sweats, weight loss is also observed. Patients may also present with chronic pruritus. The disease usually involves the regional lymph nodes, however, Hodgkins lymphoma can also involve extranodal sites either by direct invasion or hematogenous dissemination. A biopsy is the only way to confirm the first diagnosis of HL. The spleen, liver, lungs, and bone marrow are frequently affected. It is important to understand the architecture of the lymph node for accurate diagnosis, so fine needle aspiration and core needle biopsies are not appropriate. HL is a unique malignancy in that the tumor cells constitute the minority of the cellular population and an inadequate biopsy may fail to include malignant cells in the specimen.[3]

Classical Hodgkin lymphoma accounts for approximately 95% of all HL, and it is further subdivided into four subgroups: nodular sclerosis (NSHL), lymphocyte-rich (LRHL), mixed cellularity (MCHL), and lymphocyte-depleted (LDHL).[4]

With current management approaches, patients with HL have excellent outcomes. The aim of treatment should be to achieve optimum disease control while minimizing the risk of long-term treatment-related side effects. After 10–30 years, the overall mortality rate from causes other than Hodgkin's lymphoma may exceed that of Hodgkin's lymphoma.[5]

Case report:

This gentleman is a 20-year-old Saudi male, not known to have any chronic medical illnesses, presented to our emergency department in King Fahad Hofuf Hospital with a history of yellowish discoloration of the sclera, malaise, and subjective fever for the past 5 months. There was a history of right upper quadrant abdominal pain, severe pruritus with dark-colored urine, anorexia, and 30 kg weight loss, which was unintentionally over a period of 6 months. He had a history of palpitations and dizziness. He is a smoker of 5 pack years, but denied any history of illicit drug or herbal abuse. There is no history of traveling outside Saudi Arabia or recent vaccinations. He had two brothers who died at a younger age due to complications from cystic fibrosis, but they did not have similar symptoms. Firstly, he presented with the same presentation 3 months ago, but he was discharged against medical advice before completing the investigations and reaching a final diagnosis as he refused liver biopsy and Computed Tomography (CT) evaluation, but at this time he came with more deteriorating symptoms. In the ER, his fever was documented at 38 degrees Celsius; otherwise, he was vitally stable. General & systemic examinations were remarkable for cachexia, green olive jaundice, digital clubbing, hepatomegaly without splenomegaly, righter quadrant tenderness, and palpable bilateral deep cervical lymph nodes (which were impalpable in the previous presentation), no other areas of palpable lymph nodes. His initial lab results for this presentation in comparison to the previous admission respectively show white blood counts (5.7 from 10.4) 10^9/L, hemoglobin (7.9 from 13) 10^12/L, mean corpuscular volume (59.8 from 61.7) %, platelets (76 from 262) 10^9, urea (8.9 from 4.5) mmol/l, creatinine (113 from 54) umol/l, AST (221 from 100) U/L, ALT (137 from 195) U/L, total bilirubin (392 from 270) umol/L, direct bilirubin (318 from 222) umol/L, ALP (1273 from 592) U/L. His previous admission's initial workup which has been done to rule out gastrointestinal causes included unremarkable results of hepatitis profile, HIV serology, and autoimmune markers such as ANA & AMA. Abdominal US showed hepatomegaly but with normal liver texture and normal CBD diameter with no gall bladder stones. Pan CT scan including neck, chest, abdomen & pelvis was remarkable for retroperitoneal multiple small lymph nodes. During his hospital stay, he was not improving clinically, he had a continuous low grade fever with generalized body pain & fatigue despite using pain control & antipyretic medications. Liver biopsy was discouraged at this time as it carries a high risk of complications due to coagulopathy he developed at this presentation, so surgical lymph node excisional biopsy was advised by the hematologist to rule out hemato-oncological causes, which was done for the most accessible superficial lymph node. The excisional biopsy demonstrated HL with lymphocytic depletion with positive CD15 & CD30, while negative for CD45. The patient was then referred to a higher center for further investigations and treatment, as we don't have an oncology center in our region. Despite starting him on a chemotherapy regimen there

(DHAP regimen), he was clinically worsening, as he ended up with acute liver failure complicated by hepatic encephalopathy & coagulopathy. He was intubated in the ICU, and ultimately he passed away after 1 week of admission.

DISCUSSION :

Hodgkin's lymphoma (HL) presents with paraaneoplastic cholestasis rarely. Two distinct entities causing this clinical picture have been described: idiopathic cholestasis and vanishing bile duct syndrome (VBDS).[6]

Ari Ballonoff et al performed a literature search on www.pubmed.com to identify all case reports of HL-related IC or VBDS, and it identified 29 articles referring to 38 cases of HL-related VBDS or IC. Among the 38 cases, only 8% that represented lymphocyte depleted type of HL, which is the case in our patient.[7]

Cervantes et al1 reviewed 421 HL cases and only six patients (1.4%) had presentations purely with hepatic abnormalities. On presentation, four out of six patients were jaundiced. When liver involvement is present in HL, the prognosis is generally poor.[8]

Rarely, Hodgkin's lymphoma can cause vanishing bile duct syndrome. As liver biopsy samples show cholestasis without lymphoma cells, a paraneoplastic effect seems to be most likely. The vast majority of patients died from liver failure or progressive disease despite adequate treatment. In our patient, we couldn't rule out or confirm this diagnosis as liver biopsy was not done firstly due to patient refusal and secondly due to the high risk that it carries.[9]

In Stefan K.Barta et al, they discussed the differences between HL-related idiopathic cholestasis and VBDS. The difference between these two illnesses has prognostic implications: early-stage HL patients with idiopathic cholestasis usually recover with treatment, whereas people with VBDS die from it. This conclusion has raised the suspicion that our patient might have VBDS.[10]

Similar to our case, Abedi SH et al reported a case of a 38-year-old man who came to thier hospital with jaundice, pruritis, nausea, vomiting, weight loss, and recurrent episodes of fever without any hepatospl enomegaly or lymphadenopathy. Hepatocellular and cholestasis patterns were seen in laboratory tests. His liver biopsy shows a pattern which is compatible with Primary sclerosing cholangitis (PSC), Secondary sclerosing cholangitis (SSC), or drug-induced cholestasis, but eventually he was diagnosed with HL after the lymph nodes have appeared. So, cholestatic jaundice might precede clinical lymphadenopathy for several months in patients with HL.[11]

McCarthy used DHAP in a patient with liver HL and bilirubin of 13.2 mg/dL, however our patient had even higher bilirubin levels that did respond to our aforementioned management. McCarthy and Orellana used DHAP and GDP as initial treatment, respectively; however, both patients were followed by ABVD with successful treatment. In our case, we used DHAP with bad clinical response.[12,13]

Our patient presented a significant diagnostic challenge, since HL presenting only with a chlestatic picture with minimal lymphade nopathy can be easily confused with other causes such as viral, autoimmune, and hemochromatosis.

CONCLUSION :

Our findings emphasize the value of early liver biopsy in the diagnostic algorithm along with consideration of HL-related idiopathic intrahepatic cholestasis as a diagnosis of exclusion in cholestatic jaundice of unknown origin. Also, the possibility of a vanishing bile duct syndrome should be considered in the differential diagnosis of unexplained intrahepatic cholestasis in patients with Hodgkin's disease.

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