



Abnormal Liver function test is not always intrahepatic cholestasis of pregnancy

Aleyaasin N, Dhingra S, and Baker S
Obstetrics and Gynaecology
Mid Yorkshire Teaching Trust, Wakefield

Objective

To highlight the importance of interpreting abnormal liver function tests (LFTs) in pregnant women with suspected “intrahepatic cholestasis of pregnancy” (ICP) with atypical features.

Case Report

A thirty year-old Asian woman, primigravida, presented with severe pruritus at 30+4 weeks gestation. She had no known co-morbidities and screening for obstetric cholestasis revealed deranged LFTs and raised bile acids. Ursodeoxycholic acid was commenced, hepatitis serology and antibody screening were normal. Despite the treatment, the symptoms and LFTs continued to worsen. Woman reported significant weight loss and poor compliance with medication due to poor appetite.

A liver ultrasound scan at 33+5 weeks revealed vascular lesions within the liver and spleen highly suspicious of malignancy. Following a case discussion at the gastroenterology multidisciplinary team (MDT) meeting, MRI scan was arranged in the immediate postnatal period. Induction of labour was arranged at 37+4 weeks and she had an uncomplicated vaginal delivery with good foetal outcome. A postnatal MRI reported a large lesion displacing brachiocephalic and pulmonary arteries. Multiple enlarged mediastinal, coeliac, gastric lymph nodes and multiple large lesions in liver and spleen were also reported. The radiological Impression was of lymphoma and histology revealed Classical Hodgkin lymphoma of a nodular sclerosing type.

Discussion

Hodgkin lymphoma (HL) is the most common hematologic malignancy complicating pregnancy, with the peak incidence coinciding with reproductive years, and as many as 3% of all HL patients present with concurrent pregnancy. The management of a pregnant patient with HL requires a MDT approach combining expertise in medical oncology, high-risk obstetrics, and neonatology.

There are no current guidance on the management of HL in pregnancy. The RCOG guidance on “intrahepatic cholestasis of pregnancy” (August 2022) recommend considering additional antenatal testing only if there are atypical clinical symptoms, presence of relevant comorbidities, or where early onset severe ICP is noted. This woman had atypical clinical features (loss of weight, poor appetite) with no improvement with conventional treatment.

An individualised approach to treatment is required and dependant on maternal health, foetal gestation and staging of lymphoma.

Evidence for management of disease in first trimester is limited and controversial owing to potential risk of teratogenicity, miscarriage and poor fetal outcomes.

Latest international consensus meeting in 2016 recommended that for diagnosis of HL in early pregnancy – treatment can be delayed to second trimester, if not possible termination should be offered to administer therapy. For a diagnosis of HL in later pregnancy advice is to treat the patient as would be in non-pregnancy.



Conclusion

Itching of normal skin, liver dysfunction and elevated bile acid concentrations are non-specific and have a wide range of causes. An Obstetrician should consider other potential diagnoses: these may be pregnancy specific or coincidental to the pregnancy. Management of HL in pregnancy can be extremely difficult. Management should focus on achieving the best outcome for the mother with minimal risk to the foetus. Management depends on presenting features, gestational age at diagnosis, foetal risks and the patient’s wishes regarding the continuation of pregnancy.

References

Amant, F., Vandenbroucke, T., Verheecke, M., Fumagalli, M., Halaska, M.J., Boere, I., Han, S., Gziri, M.M., Peccatori, F., Rob, L. and Lok, C., 2015. Pediatric outcome after maternal cancer diagnosed during pregnancy. *New England Journal of Medicine*, 373(19), pp.1824-1834.

Avilés, A., Díaz-Maqueo, J.C., Talavera, A., Guzmán, R. and García, E.L., 1991. Growth and development of children of mothers treated with chemotherapy during pregnancy: current status of 43 children. *American journal of hematology*, 36(4), pp.243-248.

Brenner, B., Avivi, I. and Lishner, M., 2012. Haematological cancers in pregnancy. *The Lancet*, 379(9815), pp.580-587.

Cardonick, E. and Iacobucci, A., 2004. Use of chemotherapy during human pregnancy. *The lancet oncology*, 5(5), pp.283-291.

Evens, A.M., Advani, R., Press, O.W., Lossos, I.S., Vose, J.M., Hernandez-Ilizaliturri, F.J., Robinson, B.K., Otis, S., Nadav Dagan, L., Abdallah, R. and Kroll-Desrosiers, A., 2013. Lymphoma occurring during pregnancy: antenatal therapy, complications, and maternal survival in a multicenter analysis. *Journal of Clinical Oncology*, 31(32), pp.4132-4139.

Eyre, T.A., Lau, I.J., Mackillop, L. and Collins, G.P., 2015. Management and controversies of classical Hodgkin lymphoma in pregnancy. *British journal of haematology*, 169(5), pp.613-630.

Follows, G.A., Ardeshta, K.M., Barrington, S.F., Culligan, D.J., Hoskin, P.J., Linch, D., Sadullah, S., Williams, M.V. and Wimperis, J.Z., 2014. Guidelines for the first line management of classical Hodgkins lymphoma. *British journal of haematology*, 166(1), pp.34-49.

Johnson, P. and McKenzie, H., 2015. How I treat advanced classical Hodgkin lymphoma. *Blood*, 125(11), pp.1717-1723.

Kal, H.B. and Struikmans, H., 2005. Radiotherapy during pregnancy: fact and fiction. *The lancet oncology*, 6(5), pp.328-333.

Lishner, M., Zemlickis, D., Degendorfer, P., Panzarella, T., Sutcliffe, S.B. and Koren, G., 1992. Maternal and foetal outcome following Hodgkin's disease in pregnancy. *British journal of cancer*, 65(1), p.114.

Lishner, M., Avivi, I., Apperley, J., Dierickx, D., Evens, A., Fumagalli, M., Nulman, I., Oduncu, F., Peccatori, F., Robinson, S. and Van Calsteren, K., 2016. Hematologic malignancies in pregnancy: management guidelines from an international consensus meeting. *Journal of Clinical Oncology*, 34(5), pp.501-508.

Bachanova V and Connors JM. Hodgkin lymphoma in pregnancy. *Current hematologic malignancy reports*, 2013. 8: 211–217

Yahalom J, et al. Management of classical Hodgkin lymphoma during pregnancy 2017.

Pinnix, C.C., Osborne, E.M., Chihara, D., Lai, P., Zhou, S., Ramirez, M.M., Oki, Y., Hagemeister, F.B., Rodriguez, A.M., Samaniego, F. and Fowler, N., 2016. Maternal and fetal outcomes after therapy for Hodgkin or non-Hodgkin lymphoma diagnosed during pregnancy. *JAMA oncology*, 2(8), pp.1065-1069.

Zemlickis, D., Lishner, M., Degendorfer, P., Panzarella, T., Sutcliffe, S.B. and Koren, G., 1992. Fetal outcome after in utero exposure to cancer chemotherapy. *Archives of internal medicine*, 152(3), pp.573-576.