Recurrent Cholestatic Jaundice – Think beyond Viral Hepatitis

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Abstract- We report a case of recurrent intrahepatic cholestasis in an 4-year-old boy who developed four episodes of purities and jaundice at the ages of 6 months, 1yr 2yr and 4 years. Each episodes had lasted 6-8 weeks and the 2nd and 3rd episodes were associated with fever which had lasted for 4-6 days. The liver functions were minimally deranged and serum bilirubin, returned to normal between attacks. Investigation in previous episodes proved cholestatic hepatitis and excluded other causes of liver disease. First three episodes had been diagnosed as viral hepatitis and managed for the same. On 4th recurrence child had been extensively investigated and proved to have features of benign recurrent intrahepatic cholestasis (BRIC). Rarity of the disease and its unpredictable clinical morbidity and resemblance to viral hepatitis prompted us to report this case.

Index Terms- cholestasis, jaundice, benign recurrent intrahepatic cholestasis

I. INTRODUCTION

Benign recurrent intrahepatic cholestasis (BRIC) is a rare hereditary disorder characterized by recurrent and intermittent episodes of cholestasis, episodes of pruritus and jaundice with normal extra hepatic biliary tree. It can be Familial or sporadic, and can be both autosomal recessive or autosomal dominant in inheritance. The disease may start in early infancy or childhood but does not proceed to cirrhosis or chronic liver disease and is associated with normal life expectancy. (1) Attacks last from several weeks to months and resolve spontaneously. Between attacks patients remain well for months to years. (2)

Case Report

4 yr boy presenting with with complaints of yellow discoloration of sclera, urine and associated with loss appetite, generalized itching all over body more in night since 06 weeks. Past history of recurrent cholestatic jaundice episode, with similar complaints, at the ages of 6 months, 1 year and 2 years of life was present. Each episode had lasted 4-8 weeks. The 2nd and 3rd episodes were associated with 4-6 days of fever at the onset of symptoms. On examination child was stunted and wasted with features suggestive of vitamin A deficiency and multiple scratch markings.

The liver functions in last two episodes ranged as depicted in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>3rd episode at presentation</th>
<th>3rd episode at last follow up (6 weeks later)</th>
<th>4th episode at presentation</th>
<th>4th episode at last follow up (8 weeks later)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Serum Bil (Conjugate)</td>
<td>16.3 (11,5)</td>
<td>1.4 (1.1)</td>
<td>10.3 (8.3)</td>
<td>3.9</td>
</tr>
<tr>
<td>SGOT</td>
<td>124</td>
<td>84</td>
<td>56</td>
<td>60</td>
</tr>
<tr>
<td>SGPT</td>
<td>76</td>
<td>54</td>
<td>21</td>
<td>40</td>
</tr>
<tr>
<td>ALP</td>
<td>386</td>
<td>384</td>
<td>338</td>
<td>269</td>
</tr>
<tr>
<td>Albumin</td>
<td>3.65</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1- The liver functions

Other Investigation suggested - Hb 12.3, TLC 16400, P 44%, pletlet 3.5 lakhs, Bun/creatinine 12/0.5. PT/PTTK normal, GGT 190 U/L, HbsAG/anti HCV/anti HAV/anti HEV-Negative, HbeAg- negative serum ceruloplasmin -0.471 µg/l, ICT MP negative, ANA –negative, TORCH titers & HSV were negative, VDRL and HIV--negativeChest x ray normal, USG abdomen-hepatomegaly 10.5 cm, MRCP-contracted Gall Bladder with normal intrahepatic and extra hepatic biliary radicals. HIDA scan suggested of severe cholastasis with parenchyma normal. (Fig 1) & (Fig 2)
Liver biopsy showed increased lymphocytic infiltrate with piecemeal necrosis in the portal tracts with evidence of portal fibrosis. Intrahepato cellular Cholestasis was seen with paucity of bile ducts in portal triad. (fig 3 & 4)

II. DISCUSSION

Summerskill and Walshe first described benign recurrent intrahepatic cholestasis in 1959 as recurrent episodes of jaundice and pruritus. Hence its also called Summerskill-Tyngstrup-De Groote disease. Its Heterogeneous, benign disease which typically manifests early in life but later presentations have been reported. BRIC is now recognized, as a syndrome due to a mutation in ATP8B1, an aminophospholipid transporter, while BRIC2 is caused by a mutation in ABCB11. There are at least three forms of BRIC all with a similar phenotype. BRIC types 1 and 2 are inherited as autosomal recessive and are related to mutations on chromosomes 18 and 2 respectively. BRIC type 3 is transmitted as an autosomal dominant disease and is not linked to mutations on chromosomes 18 or 2. Its is characterized by self limiting cholestasis episodes and seen to exacerbate with intercurrent infections. Many a times this presentation is misdiagnosed as viral hepatitis. Luketic & Shiffman (1999) gave diagnostic criteria for BRIC, Which includes the following five criterias

1. episodes of jaundice separated by a symptom free interval lasting several months to years
2. Laboratory values ~ intrahepatic cholestasis
3. Severe pruritus secondary to cholestasis
4. Normal intra and extrahepatic bile ducts confirmed by cholangiography
5. Absence of factors known to be associated with cholestasis

Biochemical findings consist of elevated total and direct bilirubin, raised alkaline phosphatase levels and elevated bile salts but normal gamma glutamyl transferase levels. Often the diagnosis in BRIC patients is made very late and patients are subjected to invasive investigations. Elevation in gamma glutamyl transferase levels or rising levels of ALT and AST should suggest an alternative diagnosis of progressive familial intrahepatic cholestasis (PFIC). Treatment of the condition is purely symptomatic and aimed mainly at the relief of pruritus.

III. CONCLUSION

Our patient was initially managed as viral fever due to exacerbation with some intercurrent illness. All 5 diagnostic criteria for BRIC given by Luketic & Shiffman (1999) were met by our patient. He was treated symptomatically and needs long term follow up for early identification of Possible Progressive
Familial Intrahepatic Cholestasis. It's important to think beyond viral hepatitis in a case of Recurrent painless cholestatic.

REFERENCES


AUTHORS

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