Benign Recurrent Intrahepatic Cholestasis Associated with Retinitis Pigmentosa

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Abstract

A young male who had benign recurrent intrahepatic cholestasis and retinitis pigmentosa is described. The association of these two conditions has not been reported earlier.

Key words: Benign recurrent intrahepatic cholestasis, retinitis pigmentosa.

Introduction

Benign recurrent intrahepatic cholestasis (BRIC) is a rare hereditary disease, with around 70 cases reported to date. A variant has been recently described with hypothyroidism and lipid abnormalities. BRIC is known to be associated with skin lesions, but not with any ocular changes. We describe here a case of BRIC who had retinitis pigmentosa. Since both these disorders are autosomal recessive in their inheritance, their occurrence together does not appear a mere chance.

Case Report

NK, a 25 year old male, was admitted in our hospital in May 1985 with history of ten attacks of jaundice over the last seven years. He used to have progressively increasing jaundice for 6 to 8 weeks, once in six to twelve months, associated with pruritus, dark-colored stools, steatorrhoea and anorexia. Each episode used to subside spontaneously, with total clearing of sclera and urine in 12 to 15 weeks. At the time of admission he was icteric for seven weeks. There was no history of pain, fever, hematemesis or melena, drug intake or exposure to any toxin. He also had defective vision in the dark since childhood and progressive diminution of day vision for the past three years.

He was the youngest of four sibs; one elder brother also had defective vision in the dark and was previously diagnosed as having retinal pigmentation. None of the sibs had history of jaundice. The parents were non-consanguineous and asymptomatic.

Examination revealed icterus, mild pallor and no signs of hepatocellular failure. The liver was palpable two cm below the costal margin with a span of 11 cm in the mid-clavicular line. There was no splenomegaly or free fluid. Pandal examination revealed retinitis pigmentosa. Investigations showed hemoglobin of 10.4 g/dl, reticulocyte count of 1.0% and normal total and differential counts. His serum bilirubin at admission was 19.5 mg/dl (conjugated fraction 12.4 mg/dl), alkaline phosphatase was 240 IU, SGOT and SGPT 19 and 21 units/l respectively and prothrombin time 14 sec (control 13 sec). His blood was negative for HBsAg, antinuclear antibodies, anti-smooth muscle antibodies and LE cell phenomenon. An endoscopic cholangiogram showed normal extra and intrahepatic biliary ductal system. He was started on phenobarbitone 10 mg/day and over the next 3 weeks his bilirubin came down to 3 mg/dl. Liver biopsy (Fig) done 2 weeks after admission showed a normal lobular architecture, bile plugging, marked hepatocytic degenerative activity and foci of degeneration. He was discharged after three weeks and since then has been on constant follow up. He has had two more similar attacks aborted with phenobarbitone.

Discussion

Benign recurrent intrahepatic cholestasis (BRIC), first described by Summerskill and Walsh in 1959, is a rare disorder presenting with multiple episodes of cholestatic jaundice. Our patient had all the characteristics of the disease: (i) several episodes of pronounced jaundice with severe pruritus and biochemical signs of cholestasis; (ii) bile plugs in the liver biopsy; (iii) normal intra and extrahepatic bile ducts on cholangiography; (iv) absence of factors known to produce intrahepatic cholestasis, such as drug intake or pregnancy; and (v) symptom-free intervals of several months or years.

The rarity of BRIC can be assessed from the fact that, by 1976, only 61 cases had been reported. Since then at least eight more cases have been added, though the cases reported by Eriksson and Larson differ from the rest in having a chronic rather than a recurrent course. Most of the cases have originated in Europe or North America with a surprising clustering described from the Faroe islands. From Asia, cases have been reported from Japan and Israel. The case described here is the first documented case from India.

The disease is considered hereditary with autosomal recessive inheritance and poor penetrance. Familial incidence has also been described. None of the family members of our patient had symptoms pertaining...
to the hepatobiliary system. However, one brother had retinitis pigmentosa. Retinitis pigmentosa is also a hereditary disease with predominantly autosomal recessive transmission (in 96%).

4. The association of two autosomal recessive disorders in our case would raise the possibility of more than a chance occurrence. This association has not been previously reported. Retinitis pigmentosa has been known to be associated with a number of central nervous system disorders, nephrotic cystinosis, skeletal anomalies, obesity and hypogonadism, but not with any hepatobiliary disease.

It can be argued that the association described above may be merely coincidental, but considering the small number of cases of BRIC reported so far, this association could have more significance.

References