Patient Report

Vater’s papillary stenosis in a child with abdominal pain

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Stenosis of Vater’s papilla usually presents with abdominal pain, significant rise in serum transaminases and a dilated common bile duct without stone image in the cholangiograms.1 In adults, it is usually seen secondary to other underlying biliary tract disorders or after operations on the biliary tract.1,2 Endoscopic retrograde cholangiopancreatography (ERCP), is generally preferred both for diagnosis and also for the treatment of this condition. In the following case report a child with this disorder, which is rarely seen in childhood, is presented.

Case report

A girl aged 13 years and 10 months was admitted to Cerrahpasa Pediatric Clinic, Istanbul, Turkey with abdominal pain of 3 years duration. Her pain was localized to the right upper quadrant and had increased in intensity over 2 days. The physical examination revealed significant abdominal tenderness of all quadrants on palpation, the Murphy’s sign was also positive. There was no significant rise in the acute phase reactants. The levels of the liver enzymes and serum amylase were as follows: ALT, 223 U/L (normal × 10); AST, 142 U/L (normal × 7); GGT, 209 U/L (normal × 10); and amylase, 1980 U/L (normal × 15). The blood lipid and bilirubin levels were normal. Ultrasonographic examination showed hydrops of the gallbladder and an increase in its wall diameter; the intrahepatic bile ducts and the common bile duct were significantly dilated, also the bladder and the common bile duct were stuffed with bile mud. In the following 48 h, no alteration of the symptoms was recorded. Oral intake was stopped and open gastric drainage via a nasogastric tube was started. At the end of the second day minimal jaundice appeared in the sclera and the drainage material became bileous. Chronic metabolic diseases causing cholestasis such as Wilson’s disease and cystic fibrosis were excluded because serum seruloplasmin levels and the sweat test were normal, respectively. Autoantibodies were also negative. Because ultrasonographic findings suggesting obstruction in the biliary system were recorded, magnetic resonance cholangiography was employed, displaying significant dilatation of the common bile duct with obstruction image via condensation of bile mud in the distal one-third of common bile duct (Fig. 1). No stone or mass image was observed. ERCP revealed stenosis of the Vater’s papilla as the causative abnormality (Fig. 2). Endoscopic sphincterotomy was applied to overcome the stenosis. Via ERCP, the bileous material was emptied and balloon dilatation was performed for the remaining stenosis. After this procedure, ursodeoxycholic acid treatment was started. During the following days, abdominal pain and jaundice disappeared gradually. By the sixth day after the procedure, the liver enzyme levels returned to normal. Ursodeoxycholic acid treatment was stopped after 1 month. The patient remained asymptomatic with normal laboratory values after 18 months of follow up.

Discussion

Stenosis of Vater’s papilla is usually encountered in adults secondary to other biliary tract pathologies such as following cholecystectomy, chronic passage of gall stones, episodes of acute pancreatitis, chronic pancreatitis, sclerosing cholangitis, cholelithiasis, abdominal radiation and peptic ulcer disease.1–3 It is reported that a structural narrowing of part or all of the sphincter of Oddi segment associated with an elevated basal pressure and alteration of phasic contractions most likely indicate stenosis.4 This structural narrowing can be secondary to fibrosis or inflammatory processes.1,4 Stenosis of Vater’s papilla is rather rare in childhood. Vater’s papillitis and papillary stenosis were reported only in children with immunodeficient disease.5 The stenosis of Vater’s papilla is differentiated from other biliary pathologies such as anomalous junction of pancreaticobiliary duct or choledochal cyst which is commonly seen in childhood. The presence of biliary type abdominal pain
Abdominal pain due to papillary stenosis and elevation of liver enzymes and/or amylase, plus dilatation of the common bile duct may be the findings of these diseases. Our case presenting with right upper quadrant pain and increased transaminase and amylase levels at admission suggested to us a biliary pathology. In the second step, ultrasonography, the most helpful visualisation method of the biliary tract in children, was performed. No cyst was noted although ultrasonography is the most useful diagnostic tool for choledocal cyst. Hydrops of the gallbladder and dilatation of intrahepatic and common bile ducts were shown. Hydrops of the gallbladder is occasionally observed in the course of some viral infections and acute cholecystitis. In acute cholecystitis, additional signs such as fever and rise in the acute phase reactants are present, therefore, acute cholecystitis was excluded in our patient. As HAV and EBV are accused of causing gallbladder hydrops, viral screening for HAV IgM and EBV IgM was performed and found to be negative. Chronic course of the pain drew our attention to chronic diseases affecting the biliary tract, therefore, some primary diseases such as Wilson’s disease and cystic fibrosis were excluded. The lack of developmental delay supporting chronic metabolic diseases made further investigation unnecessary. Upon revealing dilatation of the common bile duct, magnetic resonance cholangiography was performed as a more detailed visualisation method. But as enough information about the etiology of obstruction was not obtained in the magnetic resonance imaging, ERCP was performed as the last step of work up. ERCP, as a method of complete visualisation of biliary ducts, didn’t show a common channel longer than 15 mm suggesting anomalous junction of pancreaticobiliary duct.

Endoscopic sphincterotomy has been used in the management of common bile duct stones and in the treatment of stenosis of the Vater’s papilla. As soon as stenosis is diagnosed by ERCP, treatment via endoscopic sphincterotomy at the same occasion is rather safe and practical. Although some cases necessitate balloon dilatation or stent placement additionally, sphincterotomy alone is enough for the cure in most patients. Recurrent biliary pain, hemorrhage, and infection in the early period and recurrent pancreatitis, stone formation, and cholecystitis in the late period have been observed as complications following sphincterotomy in adults. In our case, no abdominal pain was observed except on the day after the procedure.

In conclusion, even though it is rare in childhood, stenosis of Vater’s papilla should be kept in mind in the evaluation of abdominal pain in children.

References


