

## INTRAHEPATIC CHOLELITHIASIS

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Intrahepatic cholelithiasis consist of stones above common hepatic ducts in the right, left hepatic ducts or higher. The disease is prevalent in Eastern countries and Asian Area.

Recurrence oriental cholangiohepatitis due to stricture and stone of the ducts is the third common cause of Emergency admission among chinese people in Hongkong (1,2). In Iran Intranepatic calculi is relatively rare. Among 535 patients with Billiary disease came to Sina Hospital (Surgical Dept.), from 1967-1978 (Ten years-study), there has not been even one case of Intrahepatic calculi.

Here a case of Intrahepatic calculi, in Sina Hospital which was treated surgicaly, is presented and discussed.

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CASE REPORT: A 48-year old woman was admitted with epigastric pain, fever, chills and jaundice, her trouble was started one month before admission after appendectomy. She was cachectic, the liver was enlarged, hard and painful. Laboratory studies revealed: WBC:10300 mm<sup>3</sup>, E.S.R.: 125 mm, Hb 11g, Hct:33. Alkaline phosphatase 194 I.U. (normal 15-69), Total Bilirubin: 3.2 mg%.

Sonography and E.R.C.P showed dilatation of intrahepatic ducts (Right and Left hepatic ducts) with stones.

She was referred for surgery. Laparotomy by paramedian incision was done. Hepatic and common bile ducts was dilated.

Common bile duct was opened and explored. There were many stones in intrahepatic ducts, some impacted, but all of them were removed and irrigation with normal saline was done.

Then cholecystectomy, and choledochojejunostomy was performed. The result of operation was satisfactory. Total Bilirubin reduced to 1.2 mg% and Alkaline phosphatase to 99 I.U. and the patient discharged without complication.

#### PATHOGENESIS & ETIOLOGY:

The pathogenesis of Hepatic stones arising in liver is not well understood, the etiological factors consist of intrahepatic ducts obstruction, injury to ducts, Neoplasms, cholangiohepatitis, and rarely sclerosing cholangitis. Intrahepatic gall stone usually follow prolonged biliary obstruction, due to bile duct stricture or sclerosing cholangitis<sup>(14)</sup>, the stones are usually of pigment

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### DISCUSSION:

There are three types of Hepatic calculi:

1. Hepatic stone due to extrahepatic bile ducts stones.
2. Hepatic stones in intrahepatic ducts without stones in Extrahepatic ducts.
3. Hepatic calculi in liver, cyst or in Caroli's disease. Caroli's disease is a congenital cystic dilatation of intrahepatic ducts and have symptoms since early childhood. From 1934 until 1974, Seventy one cases were reported, in 8 cases there were intrahepatic stones.<sup>(11)</sup> But this dose not apply to many japanese patients.<sup>(12)</sup>

type<sup>(16)</sup>, but in primary sclerosing cholangitis, is generally accepted that stones should not be found in bile ducts system, although the stones may be present in gall bladder.<sup>(15)</sup>

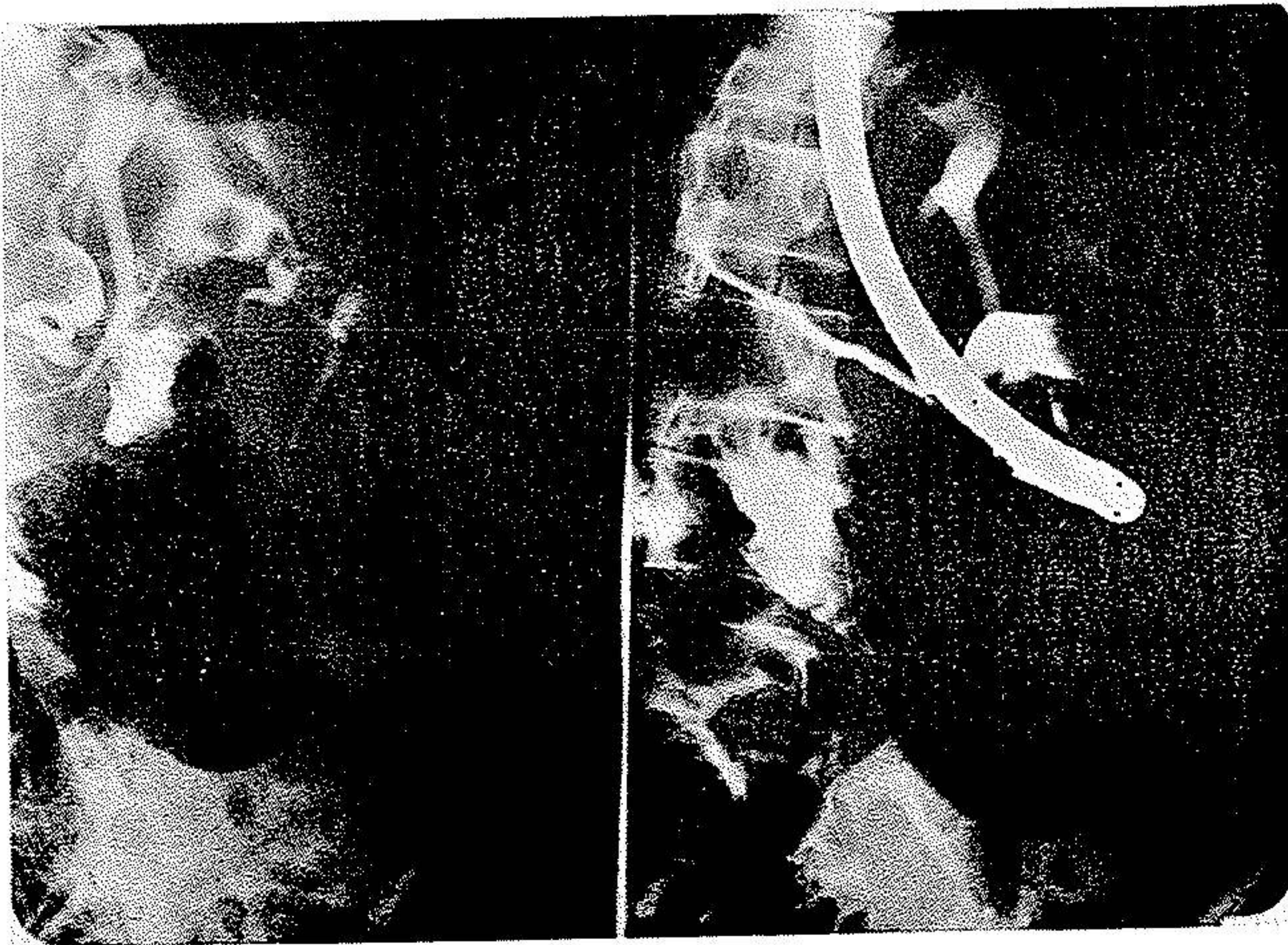
Clonorchisova were found either in stool, or in the bile<sup>(8)</sup>, but it is not always possible to demonstrate, ova or a duct parasite<sup>(2)</sup> clonorchiasis results inflammation the biliary epithelium and extends to the wall of the bile ducts and leads to periductal fibrosis and stones form around worm debri.<sup>(17)</sup> Sometimes can not find the etiological factors. Usually intrahepatic stones are of pigment type and associated with extrahepatic ducts and gallbladder stones.<sup>(1,6,7)</sup>

The incidence of intrahepatic stone alone as this presentation case is rare, in Japan among autopsy cases 4.6 to 7 percents of all patients, with cholelithiasis, were found to have intrahepatic stone.<sup>(3,12)</sup>

Common signs and symptoms of cholangitis are present. Ultra sonography, ERCP, PTC and operative cholangiography

could demonstrate dilatation of intrahepatic duct and stones.

The intrahepatic stones are bilirubinate and usually pigment stones whereas gall bladder stones which are predominately cholesterol. (1,12,16) Small gritty, dark-green or black pigment gall stones are the usual findings (14). Stagnation and infection of Bile (activity of Beta-Glucuronidase) with dietary deficiencies may be the cause of formation of calcium bilirubinate stone which are common in Asian Area. (13)



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OPERATIVE PROCEDURES:

Operative Treatment consists of removing the stones and common Bile ducts drainage either by T.Tube insertion or by bilio digestive anastomosis. Cholecystectomy is usually performed<sup>(2,6,19)</sup> side to side choledocho-duodenostomy with wide stoma at least 2 cm. Or with partial gastrectomy (Billroth II) prevent reflux cholangitis<sup>(3,7)</sup> bilioenterostomy after partial hepatectomy or repair of biliary ducts stricture have been better results,<sup>(3,9,10)</sup> in some instances retrograde drainage and lithotomy through the surface of the liver may be necessary.

SUMMARY:

A case of Intrahepatic stone and its treatment is presented. The types of intrahepatic stones, the etiological factor, the ways of diagnosis and treatment are being discussed. The disease is common in far Eastern countries and Asian Area, with clonorchis sinensis infestation, but specially in Iran when the stones is alone in Intrahepatic ducts without extrahepatic duct stone, as this case report, is very rare.

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