

Percutaneous Release of Dormia Baskets Impacted in the Common Bile Duct

Endoscopic extraction of common bile duct stones is a widely accepted and routine procedure in many hospitals. However, complications occur in about 10% of cases (1). A rare complication, which occurs in less than 1%, is impaction of a Dormia basket with an entrapped stone in the distal segment of the common bile duct. The risk factors associated with this occurrence are large bile duct stones (15–20 mm) and a narrow distal segment of the common bile duct, and the treatment required can range from a wait-and-see approach to active management, when cholangitis due to complete bile duct obstruction occurs.

Two patients with impacted Dormia baskets in the common bile duct with an entrapped stone and cholangitis were transferred to our hospital. Several attempts to release the basket had failed, and one patient had even undergone laparotomy. In our department, ultrasound-guided percutaneous biliary drainage was carried out in both patients. The percutaneous tract was dilated, and it was possible to introduce a cholangioscope (15 Fr). After the basket had been mobilized (Figure 1a), the entrapped stones were fragmented using an electrohydraulic lithotripter. It was then possible to remove the basket, and the stone fragments were cleared using baskets or flushing techniques, or both. Cholangiography confirmed the absence of residual stones (Figure 1b).

In the largest series reported (12 cases), a combination of extracorporeal shock-wave lithotripsy and endoscopic intervention proved successful (2). The total number of cases reported in the literature is 44, described by 15 authors. Twenty-seven cases required endoscopic intervention, and ten required surgical treatment. Percutaneous treatment for an impacted basket has been reported only once, but without proved success (3). As surgical intervention increases the risk of morbidity (46%) and mortality (2%), particularly due to retained stones and sepsis (4), percutaneous release of an impacted Dormia basket should be considered as an alternative treatment in patients with cholangitis in whom endoscopic attempts to remove the basket have failed.

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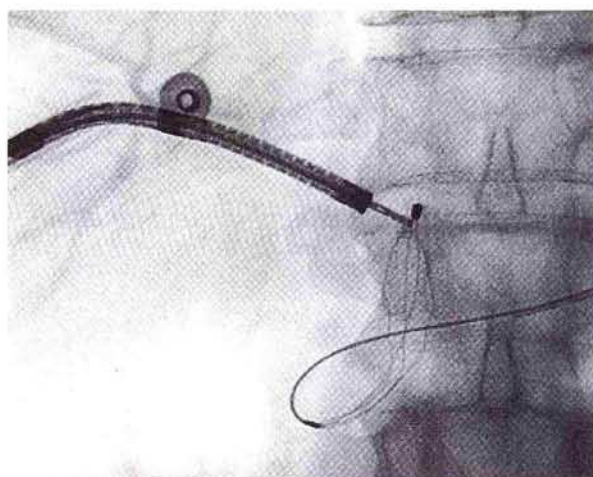


Figure 1a: Under cholangioscopic vision, the top of the impacted basket is grasped and mobilized, allowing subsequent fragmentation of the entrapped stones.

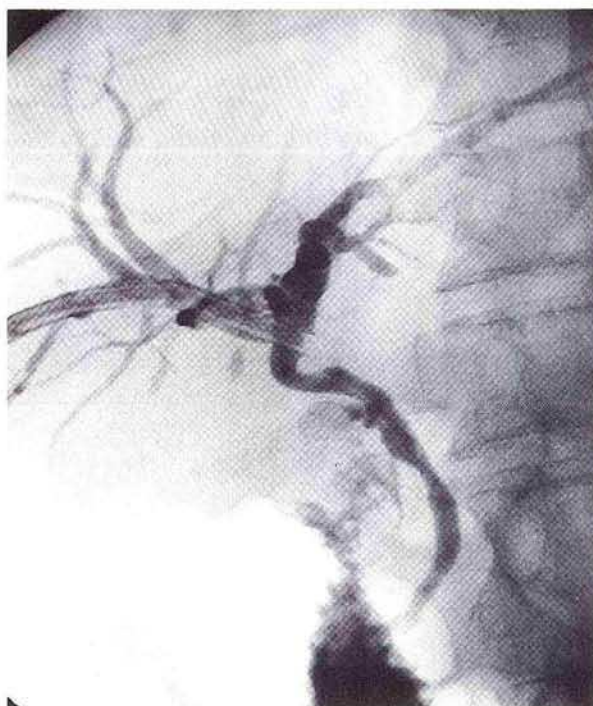


Figure 1b: Cholangiography after successful removal of the basket and stone fragments. No residual stones are visible in the common bile duct.

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