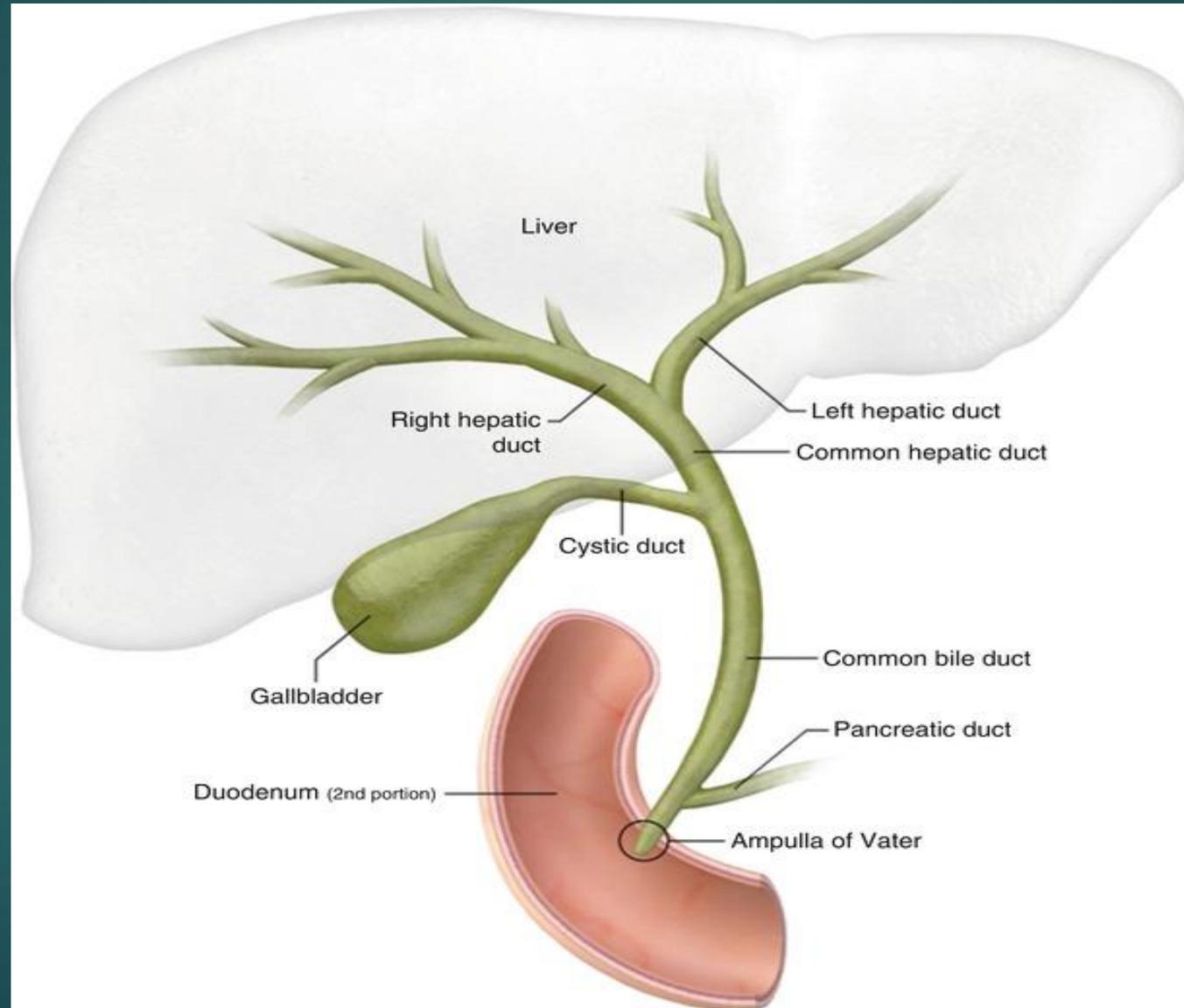


BILIARY TRACT INJURY

DR YAGHINI

Anatomy



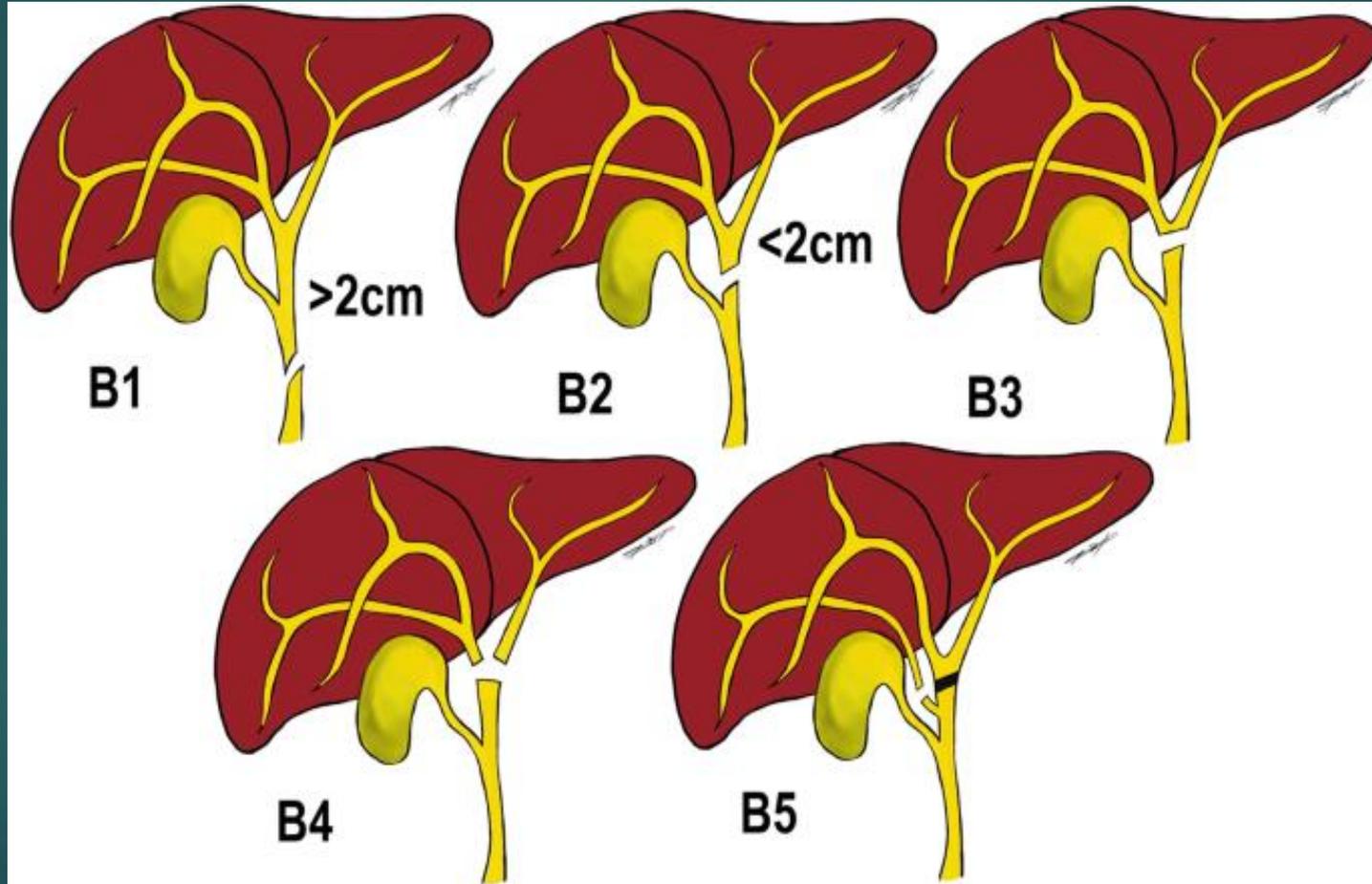
Gallbladder

- ▶ Injuries to the gallbladder itself are uncommon
- ▶ Nonpenetrating trauma can cause contusion, avulsion, laceration, rupture, or traumatic cholecystitis
- ▶ Regardless of the etiology of gallbladder injury, the treatment of choice is cholecystectomy
- ▶ The prognosis depends on the extent of related injury

Extrahepatic Bile Ducts

- ▶ penetrating trauma to the extrahepatic bile ducts usually associated with trauma to other viscera.
- ▶ The vast majority of injuries are iatrogenic, usually occurring during cholecystectomy
- ▶ These injuries can result in significant morbidity.

Biliary tract injury can also occur during common bile duct exploration, division or mobilization of the duodenum during gastrectomy, or dissection of the hepatic hilum during liver resections



Management

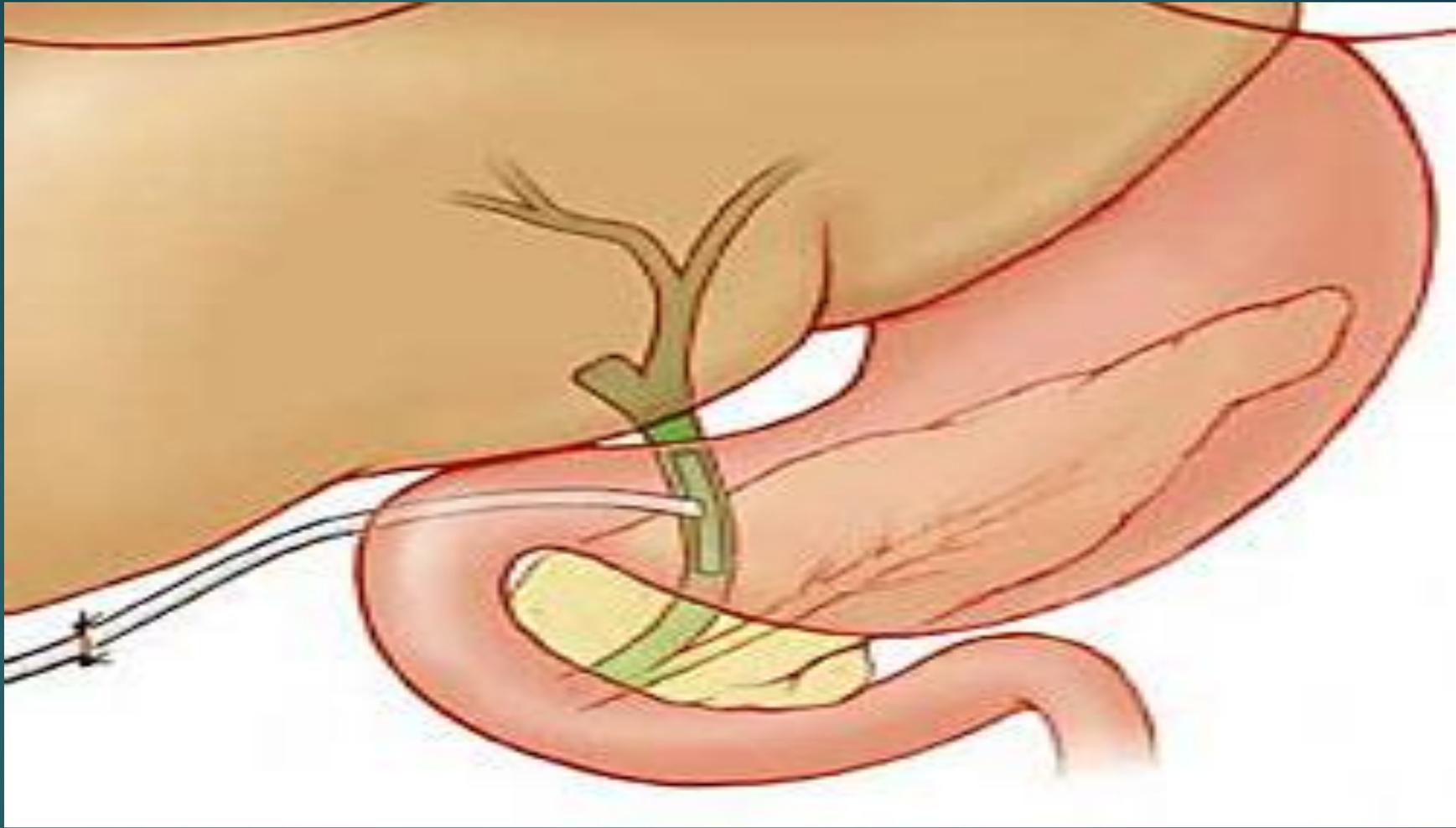
- ▶ management of bile duct injuries depends on the type, extent, and level of the injury, as well as the timing of its diagnosis.
- ▶ Initial proper treatment of bile duct injury can avoid the development of further complications or bile duct strictures.
- ▶ If an injury is discovered that exceeds the capacity of the available surgical expertise, the patient should be transferred to a tertiary care center.
- ▶ drains should be placed in the surgical bed and antibiotics initiated

- 
- ▶ bile leaks from small bile ducts (3mm) or those draining a single hepatic segment can safely be ligated.
 - ▶ If the injured duct is ≥ 4 mm, however, it is likely to drain multiple segments or an entire lobe and thus needs to be repaired or reimplanted.
 - ▶ Minor injuries to the common bile duct or the common hepatic duct are traditionally managed with placement of a T-tube.
 - ▶ If the injury is small, the T-tube may be placed through it as if it were a formal choledochotomy

- 
- ▶ In extensive injuries, T-tube should be placed through a separate choledochotomy and the injury closed over the T-tube.
 - ▶ Major bile duct injuries are best managed at the time of injury.
 - ▶ In major injuries, bile duct has not only been transected, a variable length of the duct may have been lost.
 - ▶ This injury usually requires reconstruction with a biliary-enteric anastomosis.

- 
- ▶ . If there is no or minimal loss of ductal length, a duct-to-duct repair may be done over a T-tube that is placed through a separate incision.
 - ▶ it is critical to perform a tension-free anastomosis to minimize the high risk of postoperative stricture formation.
 - ▶ Bile leaks identified postoperatively usually managed with percutaneous drainage and ERCP or PTC.

- 
- ▶ Major bile duct injuries diagnosed in the later postoperative period may not be amenable to immediate reconstruction due to acute inflammation.
 - ▶ They managed with transhepatic biliary catheter placement for biliary decompression as well as percutaneous drainage of intra-abdominal bile collections.
 - ▶ When the acute inflammation has resolved 6 to 8 weeks later, operative repair is performed.



- 
- ▶ Patients with bile duct stricture from an injury or as a sequela of previous repair usually present with progressive elevation of liver function tests, cholangitis, or cirrhosis from a remote bile duct injury.
 - ▶ Definitive treatment of refractory biliary strictures entails resection of the affected segment and reconstruction with a biliary-enteric anastomosis.

Key Point

- ▶ Good results can be expected when the injury is recognized immediately and repaired by an experienced biliary tract surgeon.



**THANK
YOU**