Semey state medical university
Department of anatomy and histology

SIW

Theme: Histology of gallbladder and biliary tract

Prepared by: Erlanova N.E, 343 group
Checked by: Uzbekova S.E

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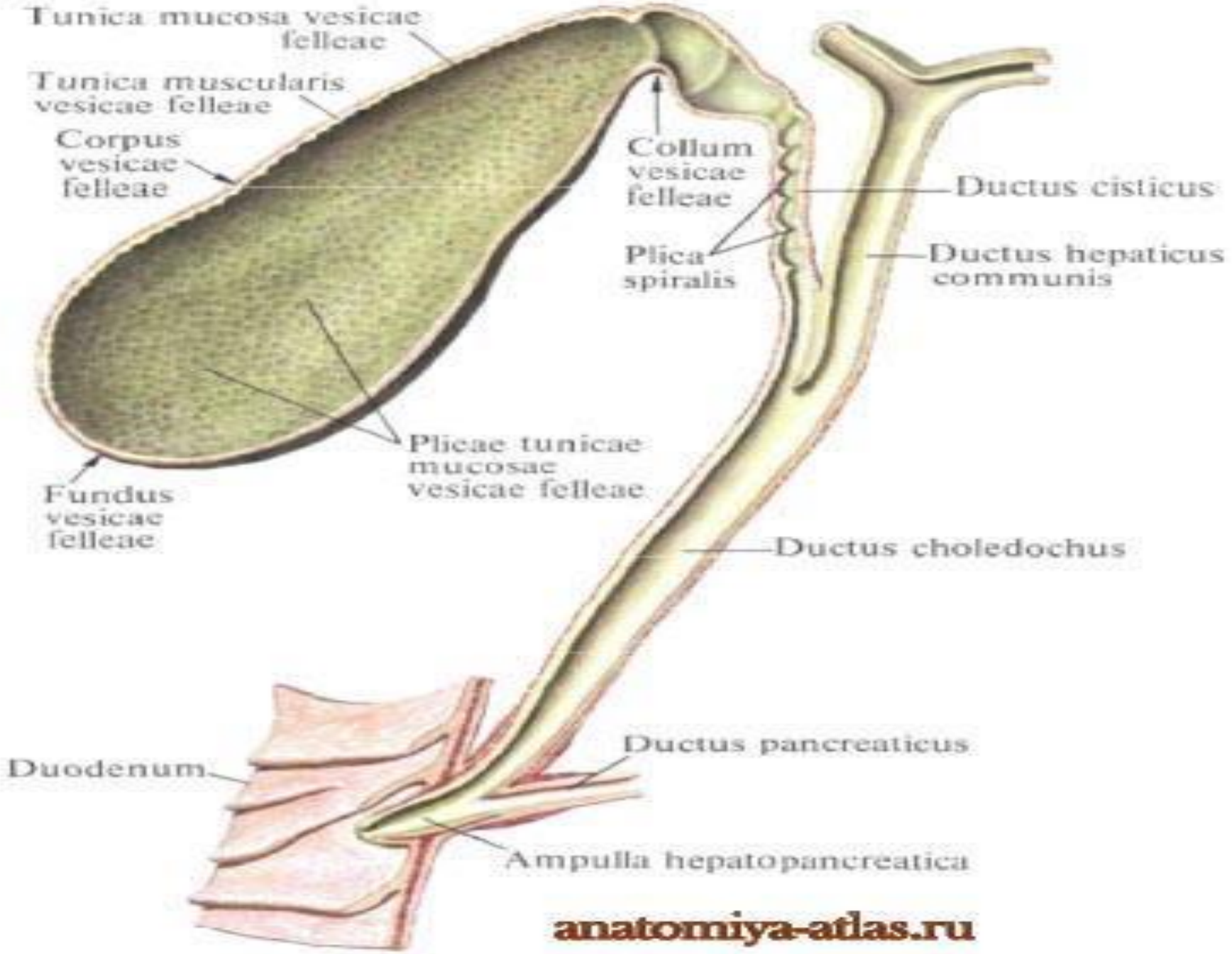
Plan:

1. Biliary tract
2. Histology of biliary tract
3. Histology of gallbladder
4. Age changes
5. Regeneration
6. Conclusion

Biliary tract— a channel of a liver for a bile conclusion, part of a gastrointestinal tract of the highest vertebral and the person. It is formed at merge of a hepatic channel and channel of a gall bladder. At the highest vertebrata conducts in a duodenum gleam (at the lowest goes to the top department of an average gut). As a rule, together with an output channel of a pancreas. In walls of a bilious channel there is Oddi's sphincter regulating frequency of intake of bile in intestines.


Tunica mucosa vesicae felleae
Tunica muscularis vesicae felleae
Corpus vesicae felleae
Collum vesicae felleae
Ductus cisticus
Plica spiralis
Ductus hepaticus communis
Plicae tunicae mucosae vesicae felleae
Fundus vesicae felleae
Ductus choledochus
Ductus pancreaticus
Duodenum
Ampulla hepatopancreatica
anatomiya-atlas.ru

The wall of biliary tract consists of 3 layer:

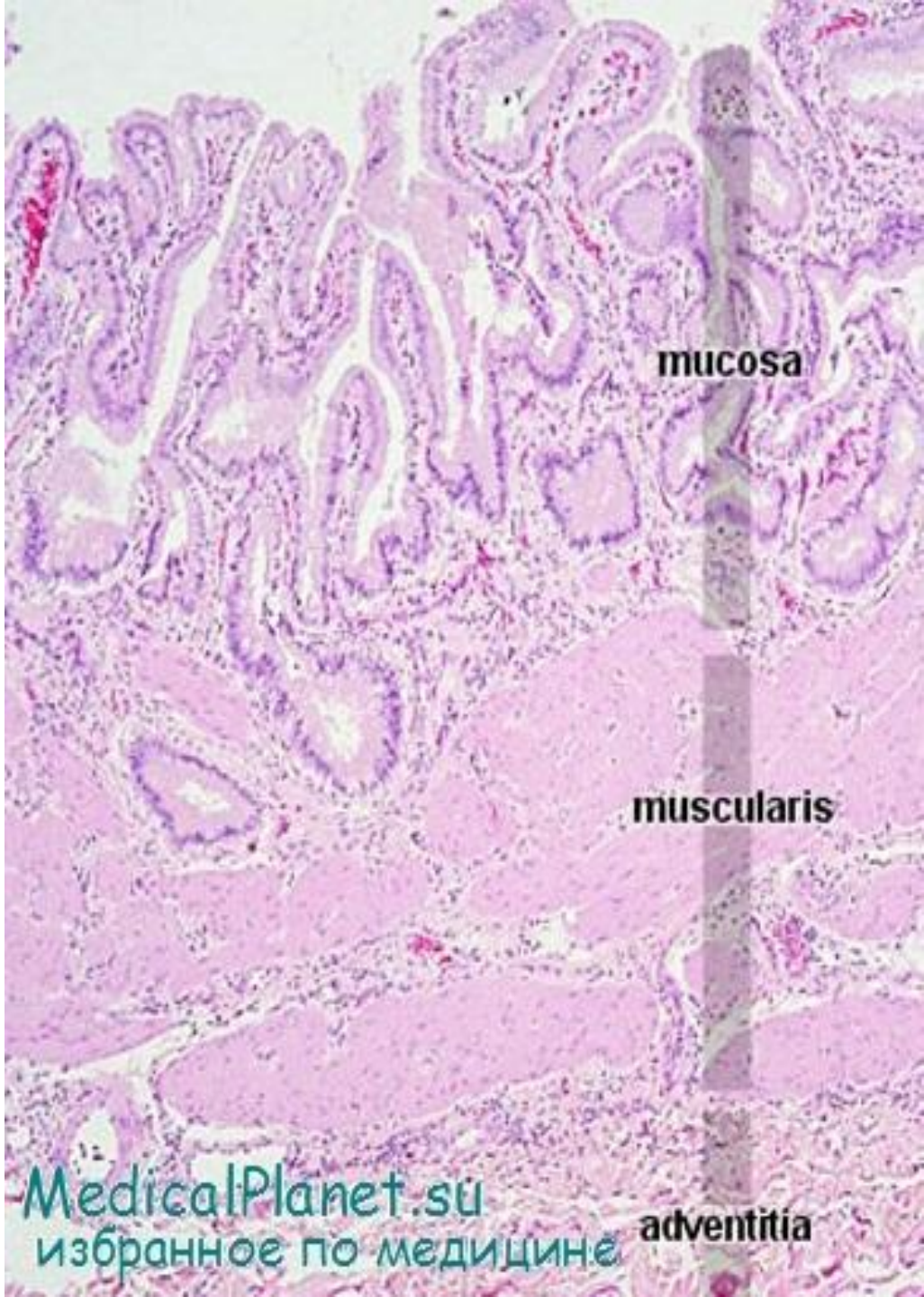
- Mucous-single-layer (high) prismatic epithelium
- Muscular –bundles of smooth myocytes
- External- LFCT

Epitelial cells are rich with lysosomes and mitochondria which concentrate mainly in their apical part. The epithelium of tract in the functional relation can carry out as secretion (mucous glands of bilious channels), and a resorption. Also goblet cells which quantity sharply increases at an inflammation of tract meet. A surface of a mucous membrane of channels on a big extent smooth, but in some sites it forms folds: a spiral fold (plica spiralis) — in a vesical duct, a row the pocket figurative of folds — in distal part of the general bilious tract. (these folds extremely complicate or do impossible sounding of a channel from a duodenum).

Generally the muscular layer is expressed better and presented to the item by two layers — external and internal; between them the vegetative (autonomous) intermuscular nervous texture containing nervous cells lies. In a place of merge of hepatic channels in the general hepatic concentric congestions of muscle fibers form similarity of a sphincter — a physiological sphincter of Mirissi. Thickenings of a muscular layer are noted and in other places: in a vesical duct — at an release from a bubble neck, generally. The item — in its intramural part. The muscular device of intramural part of the general is most difficult arranged. The item where distinguish two circular sphincters — a sphincter of the general. The item (m. sphincter ductus choledochi, PNA) located in a channel wall before an ampoule, and a sphincter of a hepatopancreatic ampoule (m. sphincter ampullae hepatopancreaticae, PNA). The specified sphincters in total with a sphincter of a pancreatic channel make the combined sphincter, the described Oddi (R. Oddi). The external cover (tunica externa) of channels is formed by friable not properly executed connecting tissue. In it vessels and nerves,

Gallbladder- thin-walled body, the bile containing 40-70 ml. Walls of a gall bladder consists of three layers:

1. Mucous
2. Muscular
3. Serous



The mucous membrane forms numerous folds. It is covered by the high prismatic epithelial cells having a border.

Under an epithelium **lamina propria** of a mucous membrane containing a large number the elastic fibers settles down. In a vesicle neck in it there are alveolar and tubular glands , which secreted mucus.

The epithelium of a mucous membrane possesses ability to soak up water and some other substances from the bile filling a bubble cavity. Therefore vesical bile always more dense consistence and more dark color, than the bile streaming directly from a liver.

The muscular layer of a gall bladder consists of bunches of the smooth myocytes located a type of a network in which their circular direction prevails. In a bubble neck circular bunches of muscular cells are especially strongly developed. Together with muscular a layer of a biliary duct they form a **sphincter.**

Between bunches of cells always there are well expressed layers of loose connective tissue. The adventitial layer of a gall bladder consists of dense fibrous connective tissue which contains a lot of thick the elastic of the fibers forming networks.

Age changes

- In hepatocytes the quantity of a lipofusin which paints cells in brown color increases.
- The number of the sharing cells sharply decreases.
- Hypertrophy of nucleus of hepatocytes
- Increasing of DNA in hepatocytes
- growth of connective tissue between liver lobes

Regeneration

The liver possesses high ability to physiological and reparative regeneration. At animals during removal from 50 to 70% of tissue of liver its initial weight is restored for 10-14 day. Processes of regeneration happen by compensatory increase in the sizes of cells and reproduction of hepatocytes. The food rich with carbohydrates and proteins stimulates regeneration of a liver.

Conclusion

The gall bladder represents the sacciform tank for the bile developed in a liver; it has the extended form with one wide, other narrow end, and bubble width from a bottom to a neck decreases gradually. Length of a gall bladder fluctuates from 8 to 14 cm, width — from 3 to 5 cm, it reaches capacity 40 — 70 cm ^{3}. It has dark green coloring and rather thin wall. In a gall bladder distinguish a bottom (Latin of fundus vesicae fellae), the most distal and wide part, a body (Latin of corpus vesicae fellae) — a middle part, and a neck (Latin of collum vesicae fellae) — peripheral narrow part from which the biliary duct (Latin of ductus cysticus), the reporting bubble with the general bilious channel (Latin of ductus choledochus departs).