AIIMS model SGE exam 2020- RRM NEXT- Surgical Gastroenterology Paper

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Correct marks-1 Negative- 1/3rd

1. **The following are features of achalasia cardia Type 2 except**
   a. 100% failed peristalsis
   b. DCI is >450 mmHg
   c. Pan Esophageal pressurisation seen for atleast 20% swallows
   d. IRP is > 15 mmHg

Ans. B DCI > 450 mmHg

(Ref Shackelford page 120)

- Due to pan Esophageal pressurisation- the DCI cannot be measured in Achalasia cardia Type 2.
- Type II achalasia (with esophageal compression): It is defined as 100% failed contraction and panesophageal pressurization for at least 20% of swallows

2. **Regarding recurrent laryngeal nerve false statement is**
   a. Right RLN hooks around the right SCA and left RLN hooks around the Arch of aorta.
   b. Non recurrent laryngeal nerve is seen in 0.1% cases on the right.
   c. During cervical esophagus dissection we must use retractor to retract trachea.
   d. Injury to both recurrent laryngeal nerve results in Stridor

Ans. C. During cervical esophagus dissection we must use retractor to retract trachea

(Ref. Shackelford page 33)

- The right nerve recurs posteriorly around the right subclavian artery, while the left nerve recurs around the aortic arch.
- Both recurrent nerves ascend in the tracheoesophageal groove, although the left nerve comes closer to the esophagus, since the cervical esophagus deviates to the left and the right nerve recurs around the subclavian more laterally.
- A nonrecurrent nerve occurs rarely on the right with incidence of 0.1% of patients on the right, with none on the left.
- The fat in the tracheoesophageal groove containing the nerve should be sharply dissected from the wall of the esophagus, and care should be taken to gently retract the trachea medially with a finger to expose the esophagus, avoiding the use of any metal retractors on the nerve.

3. **During calculation of Demeester score – the following factors are used except**
   a. Total time pH<4
   b. Upright time pH<4
   c. Supine time pH< 4
   d. Number of episodes > 10 minutes

Ans. D. Number of episodes >10 minutes

(Ref Shackelford page 45)

The following are factors are used in Demeester calculation

- Total time pH < 4
- Upright time pH<4
- Supine pH <4
- Number of episodes > 5 minutes
- Number of episodes

- Longest episode

4. **As per Los Angeles Classification " One (or more) mucosal break that is continuous between the tops of two or more mucosal folds, but which involves less than 75% of the circumference" will come under which grade**
   a. Grade B
   b. Grade C
   c. Grade D
   d. Grade E

Ans. B. Grade C

(Ref. Shackelford Page 51)
Los Angeles Classification of Reflux esophagitis

Grade	Findings
A	One (or more) mucosal break **no longer than 5 mm** that does not extend between the tops of two mucosal folds
B	One (or more) mucosal break **more than 5 mm long** that does not extend between the tops of two mucosal folds
C	One (or more) mucosal break that is continuous between the tops of two or more mucosal folds, but which involves **less than 75%** of the circumference
D	One (or more) mucosal break that involves at least 75% of the esophageal circumference

5. **False statement about the Pseudoachalasia is**
   a. It is due to mural infiltration by tumors at GEJ
   b. Diagnosis is suspected as the patients are older and rapid dysphagia seen
   c. Many cases will have no intramural mass on endoscopy or esophagogram
   d. The length of Bird's beak is shorter than classical Achalasia in these cases.

Ans. D. The length of Bird's beak is shorter than classical Achalasia in these cases.

(Ref. Shackelford page 64)
- Pseudo achalasia results from mural infiltration by malignancies at the GEJ.
- Barium mimics Classical Achalasia and in many cases, no intraluminal mass is demonstrated by esophagram or by endoscopy.
- In these cases, the diagnosis is often suspected because of the older age of the patient and the rapid onset of dysphagia.
- One paper suggests that the ***length of the "bird's beak" is greater in patients with pseudo achalasia than in those with classic achalasia.***
- When pseudo achalasia is suspected, CT of the chest and abdomen with intravenous contrast material sometimes demonstrates the infiltrative intramural mass.

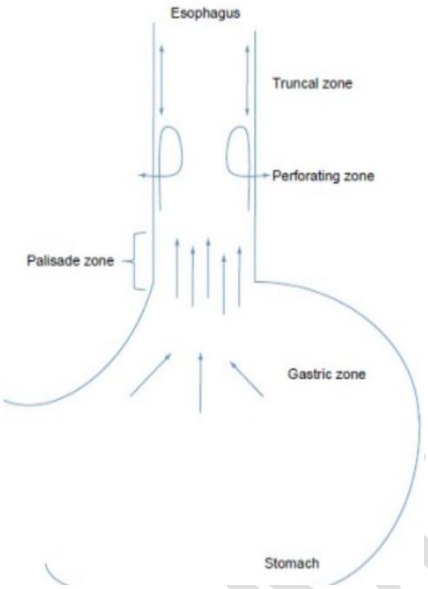
6. **Asian investigators used the following zone junctions of veins using Narrow band imaging endoscopy to identify the Esophago gastric junction**
   a. Truncal zone with perforating zone
   b. End of perforating zone

c. End of palisade zone
d. Gastric zone joining with perforating zone

Ans. C. End of palisade zone

(Ref Shackelford page 87)

- Asian investigators use the end of the esophageal palisade vessels as their landmark for the GEJ.
- Anatomic studies of the GEJ have revealed four distinct zones of venous drainage, including a gastric zone, a palisade zone, a perforating zone, and a truncal zone. (see image)
- The palisade zone comprises a group of fine, longitudinal veins located largely within the lamina propria of the distal esophagus.
- The palisade vessels pierce the muscularis mucosae distally to join the submucosal vessels of the gastric zone and proximally to join the submucosal vessels of the perforating zone.



- The palisade vessels can be difficult to visualize by conventional endoscopy, especially if there is inflammation in the distal esophagus.
- The appearance of these vessels can be enhanced by narrow band imaging endoscopy, which uses primarily blue light that penetrates only the superficial layers of the mucosa (where the palisade vessels are found) and that is absorbed by the hemoglobin within the vessels

7. Regarding LINX procedure – False statement is

a. Done by laparoscopic approach in a shorter time compared with NISSEN wrap
b. The most important contraindication is the need of MRI > 1.5 tesla
c. LINX is ideal for patients with Sliding Hiatus hernia > 3cm also
d. LINX – the most common cause for failure or removal is recurrence of symptoms
e. LINX is not approved for BARRET's Cases

Ans. C LINX is ideal for patients with Sliding Hiatus Hernia >3cm also

The contraindications for LINX (Exclusion Criteria)

RRM'S NEET SGE Mock exam

- History of dysphagia,
- Previous upper abdominal surgery,
- Previous endoluminal anti reflux procedures,
- Sliding hiatal hernia greater than 3 cm,
- Esophagitis greater than grade A
- Presence of histologically documented Barrett
- Motility disorders in esophagus

LINX is done by laparoscopy is a shorter time compared to NISSEN (average time - < 1 hour)
The current contraindication to undergo scanning in MRI systems greater than 1.5 Tesla, and the potential long-term consequences of a permanent foreign body implant.

8. **Regarding reoperation for failed fundoplication procedure – which of the following is not the correct statement?**
   a. First time failure in non obese patient may undergo redo fundoplication
   b. Collis gastroplasty for shortened esophagus
   c. Redo fundoplication can be advised for 1 time failed Obese patients
   d. Esophageal resection advised if there is stricture seen in lower esophagus

Ans. C. Redo fundoplication can be advised for 1 time failed obese patients
(Ref Shackelfor Page 272, table 23.2)

As per the table – even the 1st time failed OBESE patient must under go- Roux en Y gastric Bypass or Gastrectomy- with Esophago jejunostomy

TABLE 23.2 Indications for Reoperative Procedures

Procedure	Indication
Redo fundoplication	First-time failure in a nonobese patient (consider Toupet fundoplication for patients with esophageal dysmotility)
Collis gastroplasty or wedge fundectomy	Any reoperation involving a short esophagus or hiatal hernia (use with caution in patients with esophageal dysmotility)
Roux-en-Y gastric bypass or gastrectomy/ esophagojejunostomy	First-time failure in an obese patient Multiple prior antireflux procedures Impaired gastric motility
Esophageal or gastroesophageal junction resection	Esophageal stricture Barrett esophagus with high-grade dysplasia Severely scarred gastric fundus from multiple prior operations

9. **Regarding the Para Esophageal hernias- False statement is**
   a. Type 2 is the true paraesophageal hernia
   b. In type 2 hernia- GE junction is inside the abdominal cavity and fundus herniates posterior to esophagus.
   c. Type 4 hernia may have small bowel , colon and pancreas in mediastinum
   d. Giant Paraesophageal hernia is one where atleast 50% stomach in mediastinum.

Ans. B. In type 2 hernia- GE junction is inside the abdominal cavity and fundus herniates posterior to esophagus.

(Ref. Shackelford page 279)
Para Esophageal hernia:

- Types II, III, and IV hiatal hernias are the paraesophageal hernias.
- Paraesophageal hernia is a true hernia with a hernia sac.
- Fundus of stomach located above GE junction is the most important key feature
- Type II, or "rolling" hiatal hernias, occur when the **gastric fundus herniates anterior to the esophagus**, with a normally positioned intraabdominal GE junction.
- Type II is also referred to as a "true" paraesophageal hernia.
- Type III hiatal hernias are a combination of types I and II, in which both the GE junction and a portion of the stomach—usually the gastric fundus—herniate into the mediastinum.
- Type IV hiatal hernias contain stomach and other abdominal organs such as small bowel, colon, pancreas, or spleen in the mediastinum.
- The term *giant paraesophageal hernia* refers to large hiatal hernias where at least 50% of the stomach is in the mediastinum or the hernia measures at least 6 cm on endoscopy.

10. As per AJCC manual the node present in Subcarinal region in cancer esophagus is given number

a. 3
b. 7
c. 8
d. 9

Ans. B .7

(Ref. Shackelford Page 371)
Based on the image, this is a repeat question- Subcarinal node is given number- 7 node station. 20 is coeliac node. 20 Nodal stations are given for Esophagus cancer.

11. SANO approach in Esophageal cancer is a approach used in which of the following patients

a. Patients who completed neoadjuvant CRT and residual tumor present
b. Patients who completed neoadjuvant Chemotherapy and residual tumor present
c. Patients who completed neoadjuvant CRT and no residual tumor seen
d. After Definitive CRT

Ans. A Patients who completed neoadjuvant CRT and residual tumor present

(Ref. Shackelford page 411)

- Neoadjuvant CRT has a significant downstaging effect on both the primary tumor and the regional lymph nodes.

12. All of the following are true regarding liver morphogenesis except?

a. Hepatic competence precedes hepatic induction during morphogenesis
b. Hepatic competence is facilitated through expression of genes FOXA1 and FOXA2 along with Gata binding protein 3 and 5
c. Both FGF and BMP expression is required for hepatic induction, former is must whereas latter aides induction

d. Both HHEX and PROX-1 are the transcription factors required for hepatic morphogenesis once induction and competence is done

Ans: b
Gata binding protein 4 and 6
Ref: Blumgart 6th edition chapter 1 page 39

13. Among the parameters for measuring liver function following Portal vein embolization, which among the following is true?

a. Kinetic Growth Rate (KGR) is Degree of Hypertrophy (DH) divided by number of days following PVE
b. KGR > 2.66% correlates with decreased post hepatectomy liver failure
c. Post PVE sFLR predicts 90 day post hepatectomy mortality
d. Unlike cardiac stress test, PVE does not estimate liver capacity to tolerate stress post hepatectomy

Ans: b
Ref: Blumgart 6th edition chapter 3 page 87

14. False regarding liver function assessment tests:

a. Hepatobiliary scintigraphy and MRI with Gd-EOB-DTPA give idea of post resection liver volume and functional
b. 99mTc- GSA binds to hepatocyte receptors; 99mTc- IDA derivatives are metabolized by the liver; poor uptake of either are indicative of liver dysfunction
c. Lidocaine and galactose are completely metabolized by Liver and poor clearance indicates liver dysfuction
d. MRI with liver specific contrast does not correlate with liver function post resection

Ans: C
Small amount in not metabolized by liver
Ref: Blumgart 6th edition table 3.1

15. Which of the following liver intrinsic vasoactive substances can cause both vasoconstriction and vasodilatation of liver microcirculation through different pathways and target cells

a. Hydrogen sulfide
b. Carbon monoxide
c. Endothelin 1
d. Prostaglandin I_2

Ans: C

Endothelin is a predominant vasoconstrictor, but it dilates when it acts on Sinusoidal endothelial cells through ETB2 receptors
Ref: Blumgart 6th edition Table: 5.1

16. Not true regarding liver atrophy

a. Biliary atrophy is caused by both oncosis- non ischemic necrosis and Fas ligand mediated apoptosis
b. Arterial ligation does not lead to atrophy however radioembolization with Yttrium and holmium causes lobar atrophy

c. Compensatory hypertrophy following atrophy is induced by TNF alpha from atrophy side Kupffer cells and HGF from contralateral side stellate cells
d. Hilar cholangiocarcinoma is the most common cause for biliary atrophy

Ans: c. TNF alpha from contralateral side and HGF from atrophic side
Ref: Blumgart 6th edition, Chapter 6 page 137

17. Scoring system for fibrosis of liver- all are true except

a. Ludwig score applies for PBC and PSC
b. Kleiner score applies for NAFLD
c. Atleast one stage of fibrosis difference is found between biopsies taken from right and left lobe of liver in case of HCV and NAFLS related fibrosis
d. Knodell scoring has three stages and Ishak score has 5 stages

Ans: D
Knodell- 2 and Ishak – 6 stages
Ref: Blumgart 6th edition. Chapter 7 page 159

18. Which among the following is true regarding epidemiology of HCC?

a. 5 years cumulative risk of developing HCC in HBV carriers is twice as high as the risk with HCV carriers
b. Aflatoxin and other contaminants in diet contribute to increased risk of HCC in HBV and HCV carriers in Asia when compared to Western world
c. Women with NAFLD have higher risk for developing HCC than men
d. Relative risk of developing HCC is 15-20 fold with HBV and 5-100 fold in HCV

Ans: B
Ref: Blumgart 6th edition Chapter 9D, page 216

19. Which of the following regarding liver immunology is false?

a. IL-2,4,5,13,17 are adaptive immunity cytokines whereas IL- 1,6,10 belong to innate immunity
b. Programmed death receptor-1 have a role in immunetolerance and suppression and play an important role in pathogenesis of Autoimmune hepatitis, HCC and obstructive jaundice
c. Hepatic tolerance is contributed by release of soluble MHC- II components in portal circulation
d. TLR except TLR- 3 mediate ischemic reperfusion responses and is required for regeneration following partial hepatectomy

Ans: C- MHC- I molecules
Ref: Blumgart 6th edition Chapter- 10 Page 243

20. Nitric oxide produced by iNOS (induced NO synthase) following hepatic injury by one of the following mechanism produces protective effects

a. Endotoxemia
b. Alcoholic liver injury
c. Ischemia/ reperfusion injury
d. Hemorrhagic shock

Ans: B

Ref: Blumgart 6th edition Table 11.5

21. Liver metastases in ultrasound manifest as lesions with hypoechoic halo. This hypoechoic halo corresponds to all of the following except

a. Fibrosis
b. Compressed sinusoids
c. Selective fat sparing
d. Tumor neovascularity

Ans: C
Ref: Blumgart 6th edition page 322

22. In colorectal liver metastases, which among the following is not true regarding FDG PET CT?

a. Patients planning to undergo hepatic resection based on conventional imaging will be found to have extrahepatic disease by FDG PET in 18% to 32% of cases
b. MRI and PET CT are equivalent in identifying whether metastasis is present or absent in a given patient
c. MRI identifies more subcentimetric lesions than PET CT
d. PET CT has a false positivity rate of 2-3 percent warranting biopsy/ additional imaging before definitive diagnosis

Ans: D- False positivity rate is 8.4 percent
Ref: Blumgart 6th edition Page 369

23. Which of the following is true regarding nutrition and metabolism in liver transplantation?

a. First 12 hours post transplantation, liver uses fat instead of glucose due to redox state of mitochondria
b. Glucose should be administered in small quantity in immediate post-transplant period with insulin to encourage peripheral fat mobilization
c. Intra portal insulin administration improves liver regeneration during initial first week in LDLT
d. Glucose administration in donor increases the chance of free radical injury during cold preservation

Ans: C
Glucose in immediate post-transplant period should be administered without insulin.
Preop glucose in donors attenuates liver injury increasing glycogen stores
Liver uses fat for initial 6 hours following transplant
Ref: Blumgart 6th edition Page 547

24. Which is false regarding perioperative hepatectomy complications in recent years?

a. 90 day mortality- 1.6%
b. Ascites- 2.5%
c. Bleeding- 9%
d. Post hepatectomy liver failure- 0.5%

Ans: C-Bleeding only 0.9%, most common is bile leak- 3.2%
Ref: Blumgart 6th edition, Chapter 27, page 574 and table 27.9- last two recent studies

25. Which of the following is not an indication for initiating HBV anti-viral treatment?

a. Very high viral load with normal LFT
b. Viral load- not detectable by quantitative assay, but elevated transaminases
c. HBV DNA quantitative assay- undetectable, biopsy showing chronic inflammation

d. HBV DNA quantitative assay- mildly elevated viral load, cirrhotic patient

Ans: A
Note- undetectable DNA does not mean absent. HBsAg positive patients can have test undetectable DNA, if load is low
Ref: Blumgart 6th edition, chapter70, page 1284

26. Not a significant risk factor contributing to death in a patient with pyogenic liver abscess

a. Elevated prothrombin time
b. Elevated ALT
c. Decreased platelet count
d. Elevated BUN

Ans: A only PT and creatinine are significant risk factors
Ref: Blumgart 6th edition Table 72.2

27. True regarding fasciola hepatica

a. It's a nematode
b. It's the only parasite, which can penetrate bowel wall and Glisson capsule, while rest find its way to liver through sphincter of Oddi
c. Treatment of choice is praziquantel
d. Biochemical picture is consistent with cholestasis and hepatitis

Ans: B
It's a trematode. DOC- triclabendazole, no hepatitis, only cholestasis
Ref: Blumgart 6th edition. Chapter 73 page 1323

28. Not a cause of intrahepatic non cirrhotic portal hypertension

a. Nodular regenerative hyperplasia
b. Sarcoidosis
c. Alcoholic hepatitis
d. Arterio portal shunt

Ans: D
Ref: Blumgart 6th edition, table. 76.2

29. Which among the following is not less common in children with portal hypertension?

a. Hepatorenal syndrome
b. Ascites
c. Portopulmonary hypertension
d. Hepato pulmonary syndrome

Ans: b
Ref: Blumgart 6th edition, chapter 78, page 1414

30. Early renal failure is seen in following conditions causing acute liver failure except

a. Acetaminophen poisoning
b. Wilsons disease
c. Auto immune hepatitis
d. Pregnancy related liver failures

Ans: C

Ref: Blumgart 6th edition, chapte 79, page 1426

31. Which not the recommended primary prophylactic therapy for esophageal varices?

a. No treatment for small varices with no red wale markings in CTP A
b. Beta blockers recommended for Small CTP class B or C or having red wale markings
c. In compensated cirrhosis with medium or large varices without red wale markings, EVL is preferred
d. In decompensated cirrhotics, with medium or large varices, beta blockers and EVL have same strength of recommendations

Ans: C Beta blockers is preferred in such situation
Ref: Blumgart 6th edition, table 82.3

- In the nCRT-arm of the CROSS trial, a substantial number of patients (29% overall, 49% SCC, 23% AC) did not have any vital tumor left in the resection specimen.
- In this so-called SANO (Surgery As Needed in Oesophageal cancer patients) approach, surgical resection would be offered only to patients in whom residual disease is highly suspected or proven after nCRT.

32. False statement regarding Herpes simplex esophagitis is

a. Most common in Immunocompromised patients
b. It is less common than CMV esophagitis
c. May be associated with Eosinophilic esophagitis
d. Lesions are more common in lower esophagus

Ans. D. lesions are more common in lower esophagus (ref. Shackelford page 487)

- Herpes esophagitis, caused by the herpes simplex virus (HSV), is typically seen in immunocompromised patients.
- It occurs less frequently than CMV esophagitis
- Acute herpes esophagitis in immunocompetent patients with Eosinophilic esophagitis ,many of these cases were identified in the absence of steroid therapy.

- On endoscopy, lesions are composed of small vesicles, 1 to 3 mm in diameter, which slough to leave well-circumscribed ulcers with discrete edges.
- The lesions are most commonly found in the mid- to lower esophagus.
- Biopsy shows- Intranuclear inclusions may be large, eosinophilic and glassy, or powdery and homogeneous.
- **Optimal histologic diagnosis requires sampling of ulcer edges, because the virus infects squamous cells of intact epithelium**

33. Black Esophagus- False statement is

a. Hypoperfusion of esophagus is a common cause
b. Most commonly presents with Hematemesis or melena
c. Mortality is very high
d. Patients who survive the disease will develop late strictures after 3 months.

Ans. D. Patients who survive the disease will develop late strictures after 3 months.

Acute Esophageal Necrosis (AEN)- Black esophagus:

- Hypoperfusion due to shock, atherosclerosis, thromboembolic disease, and cardiac arrhythmias have been implied in the development of AEN.

- Surgical intervention is warranted in cases where AEN progresses to perforation, or in the presence of mediastinitis or a mediastinal abscess.

- Patients who survive are at risk for esophageal strictures, which may occur as early as 1 week after the initial diagnosis.
- These strictures may require serial endoscopy with dilation.
- In authors experience, the resulting strictures are frequently long segment, and endoscopic dilation is less likely to be effective. Surgical management is often necessary.

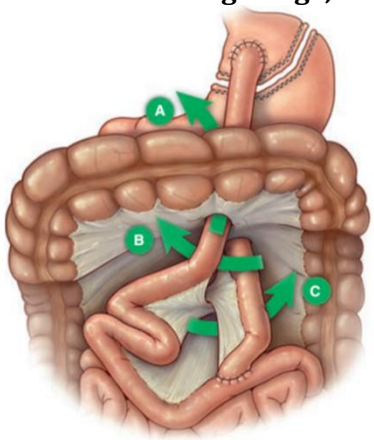
34. True regarding imaging of Hydatid cyst except ?

a. CT or MRI should be considered while planning for surgery.
b. Both can demonstrate the size and depth of cysts, the presence of daughter cysts, and extrahepatic involvement
c. CT and MRI define the surrounding anatomy and relationship to biliary and vascular structures
d. MRI with magnetic resonance cholangiopancreatography (MRCP) offers no added benefit of possible preoperative diagnosis of cystobiliary fistula

Ans D,
Shackelford p1425,

- MRCP offers the added benefit of possible preoperative diagnosis of cystobiliary fistula

35. In the following image, Brolin space is?



a. A
b. B
c. C
d. None

Ans C
Ref Shackelford page 859

In the above Image of RYGB Bariatric Surgery:

A- Transverse mesocolon defect
B- Space between Roux limb and Transverse mesocolon (Peterson Hernia)
C- Jejuno Jejunostomy Mesentric defect (BROLIN SPACE)

RRM'S NEET SGE Mock exam

36. Regarding the Mesh used in Hernias- False statement is

a. Light weight mesh has weight < 35gm/m2
b. Light weight mesh can cause central failure
c. Heavy weight mesh has a Tensile strength at >1200 Newtons/ m2
d. ePTFE is a light weight mesh

Ans. D ePTFE is a light weight mesh (ref Shackelford Page 625)

- Lightweight mesh is also considered less than 35 g/ with large pores of up to 4 mm.
- Midweight mesh is between 35 and 60 g/m2 and has larger caliber filaments, is woven, and has larger pores. Heavyweight mesh has a density of 60+ g/m2, and a knitted, monofilament PP mesh such as Marlex has a weight of 95 g/m

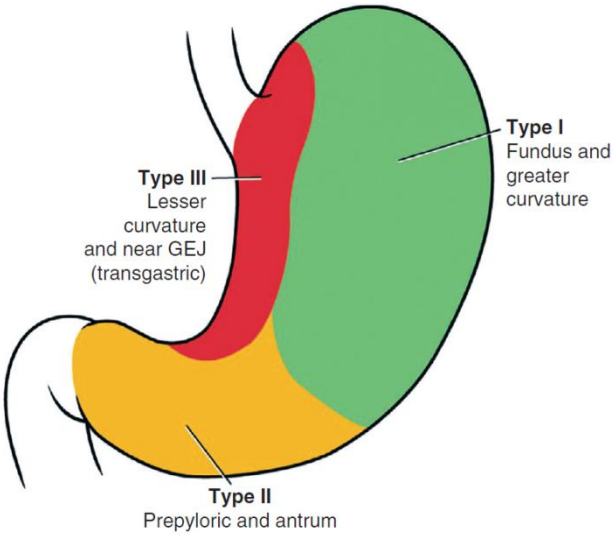
- Heavyweight mesh has higher tensile strength in the range of 1200 N compared with light (540 N) and midweight mesh (560 N).
- Past decade there has been trend away from using heavyweight for lighter weight mesh.
- Recently data have suggested that quality of life does not suffer with heavyweight mesh57 and that lightweight mesh can suffer catastrophic central failure due to shearing forces, which can result in inordinately **high hernia recurrence rates of 8% at 1 year**
- **Therefore the use of midweight and heavyweight mesh, especially for VHR**, is now practiced
- **ePTFE is a heavy weight mesh**

37. As per Privette et all, GIST is of three types- which is false statement regarding this types

a. Type 1 can be managed by Partial gastrectomy
b. Type 2 is present in distal stomach
c. Type3 is approached by Laparoscopic transgastric resection
d. Type 2 needs total gastrectomy

Ans. Type 2 needs total gastrectomy(ref Shackelford page 955)

- Type I tumors were located in the fundus or greater curvature and were treated using a laparoscopic stapled partial gastrectomy.
- Type II tumors were located in the antrum/prepyloric region and were approached using laparoscopic distal gastrectomy.
- Type III tumors were located in the lesser curvature near the gastroesophageal junction and were resected by laparo-scopictransgastric resection



38. The following are the indications for permanent ileostomy except

a. Colonic dysmotility with poor anorectal function
b. Ulcerative colitis
c. Ileocolonic ischemia
d. Lynch syndrome

Ans. C Ileocolonic ischemia (ref. Shackelford page 992)

TABLE 84.1 Indications for Ileostomy

Type	Surgical Procedure and Disease Process
Permanent	Proctocolectomy with end ileostomy • Crohn disease • Ulcerative colitis • Polyposis (familial adenomatous polyposis, Lynch syndrome, etc.) Total colectomy or proctocolectomy with end ileostomy • Colonic dysmotility with poor anorectal function • Neurogenic bowel
Temporary	Colectomy with ileostomy • Crohn disease with subsequent ileorectal anastomosis • Ulcerative colitis as the first stage of ileal pouch anal anastomosis • *Clostridium difficile* colitis • Gastrointestinal hemorrhage Partial colectomy with ileostomy • Right colon perforation/obstruction in immunocompromised or morbidly ill • Ileocolonic ischemia
Diverting	Colorectal anastomosis • Low anastomosis • Radiation • High-risk patient Ileal pouch anal anastomosis

39. False regarding the Staple principles is

a. Avoid tension on staple lines
b. 15 plus seconds of compression is needed before deploying stapler
c. For a stapler which functions abnormally give force and staple
d. Cross staple lines must be prophylactically support sutures

Ans. C. For a stapler which functions abnormally give force and staple (Ref. Shackelford Page 1011)

Very important points to be noted in Staplers:

- Allow 15 (plus) seconds of compression before deploying the stapler. This allows for more accurate formation of staples and more stable and hemostatic configuration.
- If stapler appears to function abnormally, do not force the stapler to deploy. If creating a long staple line, check for a crotch staple.
- **Be prepared to oversew or repair/re anastomose stapled material**. Consider prophylactically addressing staple line crossings. When completed, check the anastomosis for integrity

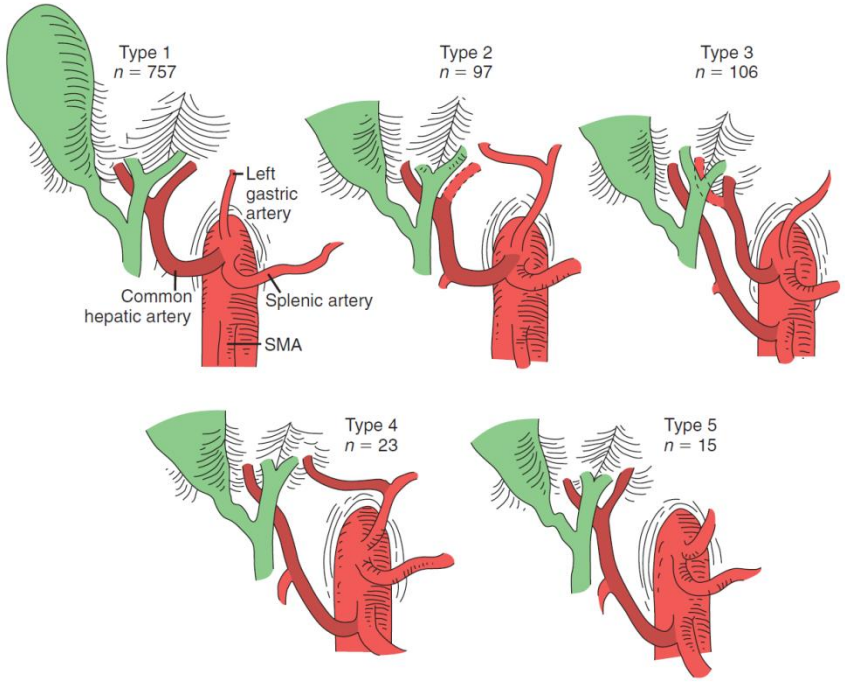
40. Regarding the arterial pattern of Hepatic arteries by Hiatt et al- False statement is

a. Type 1 is normal anatomy
b. Type 2 is replaced or Accessory Left hepatic artery coming from LGA
c. Type 3 is replaced or accessory Right Hepatic artery coming from RGA
d. Type 4 RHA arises from SMA and LHA from LGA

Ans. C. Type is replaced or accessory Right Hepatic artery coming from RGA

Hiatt et al., in the largest report to date on the surgical anatomy of the hepatic arteries, observed six arterial patterns as follows:

- Type 1, normal anatomy;
- Type 2, a replaced or accessory left hepatic artery arising from the left gastric artery;
- Type 3, a replaced or accessory right hepatic artery originating from the SMA;
- Type 4, both the right and left hepatic artery arising from the superior mesenteric and left gastric arteries, respectively;
- Type 5, the entire CHA arising as a branch of the SMA;
- Type 6, the CHA originating directly from the aorta

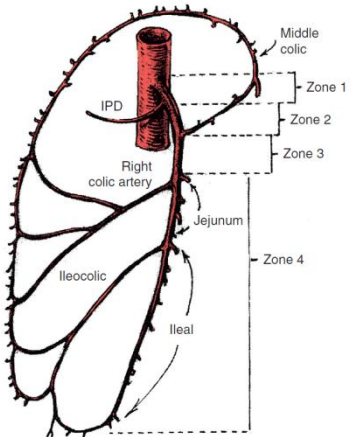


41. As per FULLEN Zones -which of the following is wrong?

a. Zone 1 is proximal to Inferior Pancreatico Duodenal Artery Branch
b. Zone 2 is between Inferior pancreatico duodenal to Middle Colic Vessels
c. Zone 3 corresponds to Middle colic vessels only
d. Zone 4 corresponds to Segmental vessels

Ans. C. Zone 3 corresponds to middle colic vessels (Ref. Shackelford page 1058)
Fullen's Zones corresponds to SMA injuries

- Zone I is the trunk proximal to the inferior pancreaticoduodenal artery.
- Zone II is the segment between the inferior pancreaticoduodenal artery and middle colic artery.
- Zone III is the segment distal to the middle colic artery.
- Zone IV gives off the segmental branches.



42. PENGUIN trial is a trial done for Pancreatic necrosectomy management comparing

a. VARD vs open necrosectomy
b. VARD vs Endoscopic necrosectomy
c. Endoscopic necrosectomy vs Step up approach

d. Open vs Endoscopic necrosectomy

Ans. B. VARD vs Endoscopic Necrosectomy (Ref. Page 1082, Shackelford)

- PANTER Trial- Step Up approach Vs Open Necrosectomy
- PENGUIN Trial- VARD Vs Endoscopic necrosectomy
- TENSION Trial- Endoscopic necrosectomy Vs Step Up approach

43. In which of the following type of Strasberg Classification of laparoscopic Biliary Injury ERCP has normal findings?

a) Type A
b) Type B
c) Type C
d) Type D

Ans: B (Ref: Sabiston 20th edition page number 1500)

<u>Strasberg Classification of laparoscopic Biliary Injuries</u>

Type A

- ✓ Bile leaks from minor ducts still in continuity with the CBD
- ✓ Includes leakage from cystic duct stump and from the subvesical duct of Luschka
- ✓ Most common cause of biliary leaks seen after laparoscopic cholecystectomy

Type B

- ✓ Occlusion of a part of the biliary tree almost always an aberrant right sectoral duct
- ✓ **As there is no bile leak ERCP finding is normal**

Type C

- ✓ Transection without ligation of an aberrant right sectoral duct

Type D

- ✓ A lateral injury to an extrahepatic duct

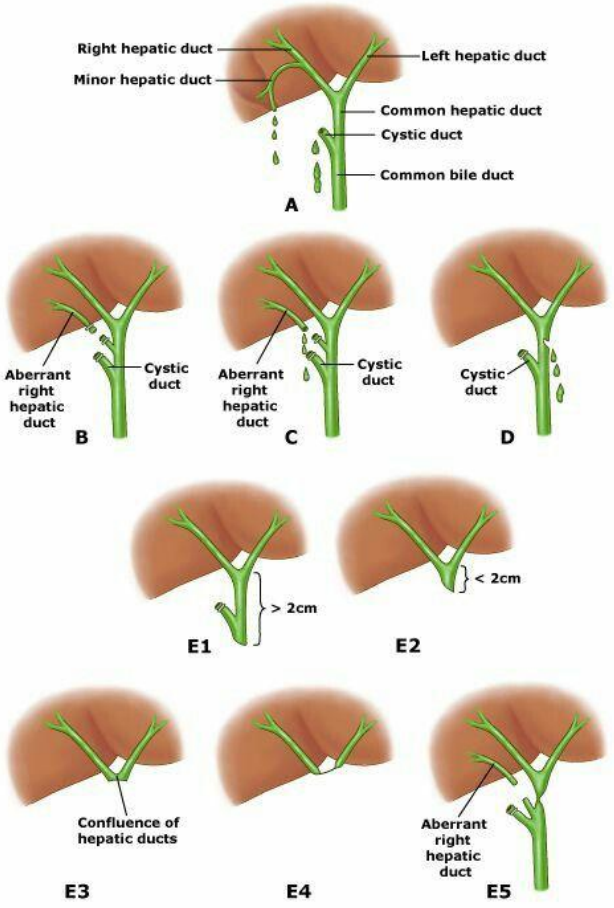
Type E1: Low common hepatic stricture, hepatic duct stump > 2cm

Type E2: Mid common hepatic duct stump <2cm

Type E3: Hilar stricture , no hepatic duct stump, confluence intact

Type E4: Destruction of the hilar confluence , right and left hepatic ducts are separated

Type E5: Involvement of aberrant right sectoral hepatic duct alone with or without a concomitant hepatic duct stricture



44. What is the treatment for left side portal hypertension ?

a) Splenectomy
b) Medical management
c) Portocaval shunt
d) Distal splenorenal shunt

Ans : A (Ref: Sabiston Page 1437)

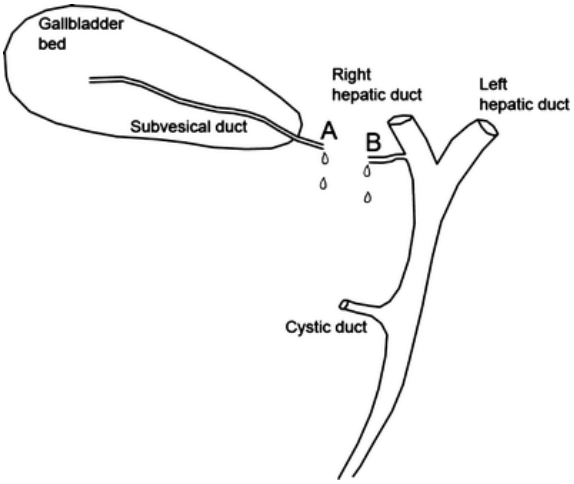
- Isolated splenic vein thrombosis (left-sided portal hypertension) is usually secondary to pancreatic inflammation or neoplasm.
- This result is gastrosplenic venous hypertension, with superior mesenteric and portal venous pressures remaining normal.
- The left gastroepiploic vein becomes a major collateral vessel, and gastric rather than esophageal varices develop.
- This variant of portal hypertension is important to recognize because it is easily reversed by splenectomy alone.

45. What happens in duct of Luschka injury?

a) Bile leak
b) Bleeding
c) Chylous ascites
d) Pneumonia

Ans: A (Ref: Love and Bailey 27th edition page number 1189)

Figure Showing Duct of Luschka :



- Duct of luschka is a duct draining directly from gallbladder to gallbladder bed directly
- Crypt of Luschka: Indentations in mucosa of gallbladder into the muscle coat
- **Sphincter of Lutkens:** Sphincter around the cystic duct
- **Valves of Heister**: Mucosal spiral folds in cystic duct
- ❖ During laparoscopic cholecystectomy the duct of luschka may be injured resulting in bile leak. .

46. CEA is raised in how many percentage cases of colon cancer ?

a) 50 %
b) 70 %
c) 90%
d) 100 %

Ans: A (Ref: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5739691/)

- Elevated serum CEA is found in 17~47% of colorectal cancer patients
- Important Tumor markers :
  - ✓ Follicular thyroid Cancer : Thyroglobulin
  - ✓ Papillary Thyroid Cancer: Thyroglobulin
  - ✓ Medullary Thyroid Cancer : Calcitonin + CEA
  - ✓ Pancreatic Cancer : Ca 19.9
  - ✓ Gall bladder cancer : CEA
  - ✓ Bile duct cancer : CEA + Ca 19.9
  - ✓ HCC: AFP , PIVKA-2
  - ✓ Fibrolamellar HCC: Neurotensin B
  - ✓ Carcinoid tumor : Chromogranin A
  - ✓ GIST: CD 117, CD 34, DOG-1
  - ✓ Malignant melanoma : HMB-45, Melan-A

47. Which of the following is true about Ulcerative colitis?

a) Risk of carcinoma is directly proportional to the duration of the disease
b) Anus is commonly involved in Ulcerative colitis patients

c) Smoking is a risk factor
d) Most common skin manifestation is erythema nodosum

Ans: A (Ref: Love and Bailey 27th edition Page 1242)

- **Important points about ulcerative colitis :**

  - ✓ Ulcerative colitis involves rectum to terminal ileum, anus is spared
  - ✓ MC Site of involvement is Rectum
  - ✓ IBD-2 locus present on chromosome 12q is found to be associated with ulcerative colitis
  - ✓ Most common presentation of the disease id diarrhea
  - ✓ Smoking has been found to be protective for ulcerative colitis
  - ✓ MC Skin manifestation is pyoderma gangrenosum
  - ✓ Other extra intestinal manifestations are : Fatty liver, Primary Sclerosing Cholangitis and Uveitis
  - ✓ IOC: Colonoscopy and biopsy
  - ✓ P-ANCA is associated with ulcerative colitis
  - ✓ Many patients can be adequately maintained for years on medical therapy
  - ✓ Toxic dilatation must be suspected in any colitic patient who develops severe abdominal pain; missed colonic perforation is associated with a high mortality
  - ✓ Colitic patients are at increased risk of developing cancer; those with pancolitis of long duration are most at risk.

48. The duct located behind the left horn of umbilical recess is

a) Seg IV
b) Seg II
c) Seg III
d) Seg I

Ans: c
Discussion :

- The umbilical fissure divides the left liver, passing between segment III and segment IV, where it may be bridged by a tongue of liver tissue.
- The ligamentum teres passes through the umbilical fissure to join the left branch of the portal vein
- The left hepatic duct drains the three segments—II, III, and IV—that constitute the left liver
- The duct that drains segment III is located slightly behind the left horn of the umbilical recess.
- It is joined by the tributary from segment Ivb to form the left duct, which is similarly joined by the duct of segment II and the duct of segment IVa, where the left branch of the portal vein turns forward and caudally.
- The left hepatic duct traverses beneath the left liver at the base of segment IV, just above and behind the left branch of the portal vein; it crosses the anterior edge of that vein and joins the right hepatic duct to constitute the hepatic ductal confluence.

49. Caudate lobectomy is a routine for hilar Cholangiocarcinoma because

a) In majority of patients caudate duct drains in to Right Hepatic
b) Caudate duct drains into right and left in majority
c) 15% drains into the right
d) 7% drains into the left

Ans: b
Discussion

- The caudate lobe (segment I) has its own biliary drainage (Healey &Schroy, 1953).

- The caudate lobe is divided into right and left portions and a caudate process.
- In 44% of individuals, three separate ducts drain these three parts of the lobe, whereas in 26% a common duct lies between the right portion of the caudate lobe proper and the caudate process and an independent duct that drains the left part of the caudate lobe.

The site of drainage of these ducts varies.

- In 78% of cases, drainage of the caudate lobe is into the right and left hepatic ducts
- In 15% drainage is by the left hepatic ductal system only.
- In about 7%, the drainage is into the right hepatic system.

50. False regarding Hartman's Pouch is

a) Congenital outpouching of infundibulum
b) Acquired diverticulum
c) Indicates prolonged gallbladder outflow obstruction
d) May lead to inflammation and perforation

Ans: a

- Diverticula may occur in any part of the gallbladder and may vary greatly in size from 0.5 to 9 cm in diameter.
- Complications – inflammation, perforation
- Hartmann pouch is an acquired diverticulum of the infundibulum or neck of the gallbladder
- This pouch projects from the convexity of the gallbladder neck and may be closely adherent to the common bile duct.
- Hartmann pouch is associated with pathologic conditions of the gallbladder, especially those involving prolonged obstruction to gallbladder emptying

51. Which of the following is not a element in "critical view of safety" technique

a) A 360 degree view of the cystic duct and artery needs to be demonstrated
b) The base of the gallbladder must be dissected off the liver bed (or cystic plate)
c) Two structures (and only two, the cystic duct and artery) enter the gallbladder
d) Cystic duct/ CBD confluence needs to be delineated

Ans :d
Discussion
Three Elements:

- The triangle of Calot must be dissected free of fat (without exposing the common bile duct)
- The base of the gallbladder must be dissected off the liver bed (or cystic plate)
- Two structures (and only two, the cystic duct and artery) enter the gallbladder and these can be seen circumferentially (360-degree view).

This creates two windows

- one between the cystic duct and the artery and
- the other between the artery and the liver bed.
- When exposing these windows, enough of the gallbladder should be taken off the liver bed

52. Which of the following is a important factor determining survival in patient undergoing surgery for hilar cholangiocarcinoma

a) Longituidinaltumor extend
b) Partial hepatectomy
c) Lymphnode involvement
d) Positive surgical margin

Ans:b
Discussion
Predictors of improved survival

- Well-differentiated tumors
- Negative resection margin
- Performance of a concomitant hepatic resection
- Patients with histologically positive margins of resection demonstrated survival outcomes indistinguishable from those with locally advanced tumors undergoing operative exploration without attempted resection.
- 5-year actuarial survival partial hepatectomy was 37%, compared with 0% with bile duct excision alone.

.

53. Which of the following is not a acceptable surgical procedure for the management of EXTRAHEPATIC cholangiocarcinoma

a) Hepatectomy
b) Whipple's pancreaticoduodenectomy
c) Orthotopic liver transplantation
d) Excision of extra hepatic biliary apparatus

Ans:d
Discussion:
Orthotopic liver transplant for cholangiocarcinoma

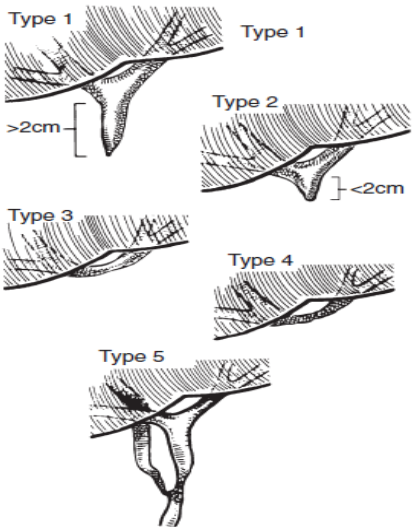
- Mayo Clinic has demonstrated promising results
- Patients with confirmed cholangiocarcinoma who are felt to have technically unresectable disease and no evidence of extrahepatic metastases

- Neoadjuvant therapy begins with an initial period of EBRT with intravenous fluorouracil, followed by transcatheter iridium-based brachytherapy, then subsequent maintenance therapy with oral capecitabine
- Staging laparotomy to confirm absence of extrahepatic disease.
- 29% of patients completing neoadjuvant chemoradiation were found to harbor extrahepatic disease
- and 5-year actuarial survival has been 88% and 82%, respectively

54. True statement regarding classification of BBS

a) Isolated right hepatic duct is classified as type V bismuth stricture
b) Strasberg type B presents with bilioma
c) Strasberg type C is the most common type
d) Hannover classification includes vascular injury

Ans :d



Type	Criteria
A	Cystic duct leak or leak from small ducts in the liver bed
B	Occlusion of an aberrant right hepatic duct
C	Transaction without ligation of an aberrant right hepatic duct
D	Lateral injury to a major bile duct
E1	Transaction >2 cm from the hilum
E2	Transaction <2 cm from the hilum
E3	Transaction in the hilum
E4	Separation of major ducts in the hilum
E5	Type C injury plus injury in the hilum

55. True statement regarding laparoscopic view of groin anatomy

a. Median umbilical fold is formed by umbilical artery
b. Lateral umbilical fold is formed by inferior epigastric vessels
c. Suprapubic fossa lies lateral to medial umbilical fold
d. medial fossa lies medial to medial umbilical fold

Ans. . b. Lateral Umbilical fold is formed by Inferior Epigastric Vessels

- The single median umbilical fold extends from the umbilicus to the urinary bladder and covers the fibrousremnant of the allantois, the urachus.
- The medial umbilical fold, on either side, is formed by the underlying obliterated portion of the fetal umbilical artery, a branch of the anterior division of the internal iliac artery.
- The lateral umbilical fold covers the inferior epigastric arteries as they course toward the posterior rectus sheath, which they enter approximately at the level of the arcuate line.
- The supravesical fossa is the depression found between the medial and median umbilical ligaments. This is also the site for hernias of the same name.
- The medial fossa is the space between the medial and lateral ligaments and is the site of direct inguinal hernias.

56. All are true statements regarding gastric motor function EXCEPT

a) Gastric pacemaker cells are located in mid body of stomach along lesser curve
b) Migrating motor complex not affected by vagotomy
c) Receptive relaxation of stomach affected by vagotomy
d) Vagotomy results in accelerated emptying of liquids

Ans. A. Gastric Pacemaker cells are located in midbody of stomach along lesser curve

- Gastric pacemaker cells are located in mid body of stomach along greater curve (not lesser curve).
- Migrating motor complex are not affected by vagotomy.
- Vagotomy results in accelerated emptying of liquids due to loss of receptive relaxation.

57. All are true statements regarding duodenal diverticulization. EXCEPT

a) First described by Vaughan
b) Performed in patients with duodenal injury
c) Antrectomy, vagotomy, oversewing of duodenal stump and duodenostomy tube placement are important components of this procedure
d)T tube biliary drainage is optional

Key – a

Ref - Shackelford seventh edition vol.1ch 54 page688.

- Originally proposed by Berne in 1974 for duodenal injury.
- This procedure served to completely isolate the duodenum from gastric contents. Antrectomy was followed by oversewing of the proximal duodenum and creation of a gastrojejunostomy.
- A truncal vagotomy completed the procedure.
- T tube biliary drainage is optional

58. True statement regarding surgical management of gastric ulcer

a) Addition of vagotomy improves ulcer healing rate in type I gastric ulcer
b) Highly selective vagotomy is not effective in type II gastric ulcer
c) Highly selective vagotomy is associated with increased recurrence rate in type III gastric ulcer
d) Schoemaker procedure a modification of Billroth type I resection is used for type III gastric ulcer

Key – c. Highly selective vagotomy is associated with increased recurrence rate in type III gastric ulcer
Ref - Shackelford seventh edition vol.1Ch 56 pages 709-711.

- Addition of vagotomy does not improve healing as type I gastric ulcers are not associated with acid hypersecretion.
- Treatment of type II gastric ulcer is similar to duodenal ulcer, with vagotomy andantrectomy or Highly selective vagotomy.
- Highly selective vagotomy is associated with poor results in type IIIgastric ulcer, with recurrence rates ranging from 16% to44%.
- Schoemaker procedure a modification of Billroth type I resection is used for type IV gastric ulcer

59. All are true statements regarding jejunogastric intussusceptionEXCEPT

a) More common after Billroth II gastrectomy compared to simple gastrojejunostomy
b) Efferent limb is usually involved
c) Resection of the intussuscepting small bowel not required in all cases
d)Can occur in both acute and chronic forms

Key – a More common after Billroth II gastrectomy compared to simple gastrojejunostomy

Ref - Shackelford seventh edition vol.1 Ch 60 page 764.

- Jejunogastric intussusception is a rare complication of gastrojejunostomy.
- It may occur after a Billroth II gastrectomy but has most commonly been seen after simple gastroenterostomy.
- In the majority of cases, the efferent limb becomes intussuscepted into the stomach.Even though both acute and chronic forms of this condition have been described, the possibility that the intussusceptummay incarcerate and eventually strangulate makes it a true surgical emergency.
- The operation of choice isresection of the intussuscepting small bowel if there isany question regarding strangulation.
- If the intussusceptedintestine is viable, the afferent and efferent limbsof jejunum may be fixed to adjacent tissue such as themesocolon, colon, or stomach to prevent recurrence.

60. According to current TNM staging (AJCC seventh edition) of gastric carcinoma a tumor which penetrate muscularispropria with invasion of gastrocolic omentum and without perforation of visceral peritoneum with 3 involved perigastric nodes and without distant metastasis will be classified as

a) Stage IIA disease
b) Stage IIB disease
c) Stage IIIA disease
d) Stage IIIB disease

Key – c

- It is T3N2M0 disease, hence stage IIIA.

61. All are true statement regarding current guidelines for endoscopic resection of early gastric cancer **EXCEPT**

a) Tumor limited to the mucosa and submucosa
b) No lymphovascular invasion
c) Tumor smaller than 2 cm
d) No ulceration

Ans– a

Ref - Sabiston 19th edition Chapter 49 page 1213.

- Guidelines for endoscopic resection are (1) tumor limited to the mucosa; (2) no lymphovascular invasion; (3) tumor smaller than 2 cm; and (4) no ulceration.
- While tumors with limited submucosal invasion areincluded in extended criteria there is only limited data to support this approach.

62. All are associated with High Serum-Ascites A Albumin Gradient**EXCEPT**

a) Budd chiari syndrome b) Myxedema
c) Serositis in connective tissue disorders d) Massive liver metastases

Ans – c

Ref - Sabiston 19th edition Chapter 45 page 1100. Table 45-1 Classification of Ascites by Serum-Ascites Albumin Gradient.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84/1, EVK Sampath Rd, Mahaveer Colony
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Nearest Railway or Metro Station - Egmore Railway Station)
Delhi : 16.02.2021 to 21.02.2021
Aiwan E Galib Auditorium Near,
Mata Sundari Ln, Mata Sundri Women's College
ITO, Mandi House, New Delhi - 110 002
(Nearest Metro - ITO Gate No 3&1)

63. True statement regarding pseudomyxomaperitonei

a) Common in females

b) Patients are usually symptomatic early in the course of disease

c) Right hemicolectomy should be performed in all patients of Pseudomyxomaperitonei with ruptured appendiceal mucinous tumor

d) 10-year survival rate of 50% in patients undergoing cytoreduction and intraperitonealheated chemotherapy (IPHC)

Ans - d

Ref - Sabiston 19th edition Chapter 45 page 1102.

- Pseudomyxomaperitonei occurs most commonly in patients who are 40 and 50 years of age and occurs with equal frequency in men and women.
- Patients are often asymptomatic until late in the course of their disease.Generally, a right hemicolectomy is performed for these tumors, although a review of 501 patients with mucinous tumors of the appendix has suggested that this is unnecessary if the resection margin at appendectomy is negative.
- Gonzalez-Moreno and Sugarbaker28 have reported 10-year survival rates of 55% in 501 patients undergoing cytoreduction and IPHC.

64. Truestatement regarding Mallory weis tear

a) Characterised by mucosal laceration just above gastroesophageal junction

b) Conservative therapy has high failure rate

c) Angiographic embolization is a useful treatment modality

d) In patients who require surgery total or proximal gastrectomy is the treatment of choice since recurrent bleeding is common

Key – c

Ref - Sabiston 19th edition Chapter 48 page 1167.

- The proposed mechanism is forceful contraction of the abdominal wall against an unrelaxed cardia, resulting in mucosal laceration of the cardia as a result of the increasedintragastric pressure.
- Supportive therapy is often all that is necessary because 90% of bleeding episodes are self-limited and the mucosa often heals within 72 hours.
- Angiographic embolization, usually with an absorbable material such as a gelatin sponge, has been successfully used in cases of failed endoscopic therapy.
- If endoscopic therapy fails, high gastrotomy and suturing of the mucosal tear is indicated.

65. All are true statements regarding gastric vascular ectasia**EXCEPT**

a) Common in fundus of stomach

b) Affected stomach gives the appearance of watermelon

c) Acute severe hemorrhage is rare

d) Argon plasma coagulation is the treatment of choice

Ans– a

Ref - Sabiston 19th edition Chapter 48 page 1168.

- Gastric antral vascular ectasia (GAVE) is characterized by a collection of dilated venules appearing as linear red streaks converging on the antrum in a longitudinal fashion, giving it the appearance of a watermelon.
- Acute severe hemorrhage is rare in GAVE and most patients present with persistent iron deficiency anemia from continued occult blood loss.
- Endoscopic therapy is indicated for persistent, transfusion-dependent bleeding and has been reportedly successful in up to 90% of patients.
- The preferred endoscopic therapy is APC. Patients failing endoscopic therapy should be considered for antrectomy.

66. Regarding Polyps removal in Colonoscopy- false statement is

a. PARIS classification gives the polyps character by Morphology
b. Polyp morphology and pit pattern have also been used as predictors of neoplasia
c. Pit pattern is less accurate than morphology in predicting malignancy
d. During colonoscopic removal we keep the polyp at 5-7'0 clock position by manuevers

Ans. C. Pit pattern is less accurate than morphology in predicting malignancy (Ref. Shackelford 8th Edition Page 1694)

- Polyp morphology and pit pattern have also been used as predictors of neoplasia
- The Paris classification categorizes polyps by gross morphology
- Kudo described pit patterns in polyps viewed under colonoscopic magnification
- Pit patterns is a highly accurate method for assessing a polyp as neoplastic or nonneoplastic.
- For all polyps, maneuvering the scope so that the polyp resides in the 5 o'clock to 7 o'clock position facilitates removal because of the location of the colonoscopy biopsy
- channel
- Pedunculated polyps are typically removed using a cautery snare.
- Polyps less than 5 mm are removed by cold biopsy forceps, which are available in standard and jumbo sizes
- Sessile polyps larger than 5 mm most commonly are removed with a snare.

67. With Radio opaque marker test for colonic transit- using 24 radio opaque markers on day 1,2,3 - when will you call the result as slow transit on a repeat X ray on 4th and 7th Day?

a. More than 68 markers in colon
b. All the markers remaining in the colon
c. More than 48 markers in colon
d. More than 24 markers in Colon

Ans. A. More than 68 markers in colon (ref. Shackelford 8th edition page 1679)

- A widely used approach is to give a capsule containing 24 radiopaque markers on days 1, 2, and 3 and count remaining markers on a plain abdominal x-ray on days 4
- and 7
- With this technique a total of 68 or fewer markers remaining in the colon is normal, whereas more than 68 markers is slow transit

68. The paracolic level nodes in Colon are seen at

a. Appendices epiploicae

b. Along marginal artery
c. Along main vessels
d. At origin of SMA

Ans. B Along margin artery (Ref. Shackelford 8th Edition page 1669)

- The epiploic group is most abundant in the sigmoid colon. They are located below the peritoneum and on the bowel wall; they also can be found within appendices epiploicae.
- Paracolic nodes are located throughout the colon along the marginal artery and also tracking among the arcades.
- The principal "main" nodes parallel the course of the SMA and IMA,
- Whereas the intermediate nodes parallel the colic arterial branches.
- All four nodal basins will drain into the paraaortic nodes, then cisterna chyli, and ultimately the thoracic duct.

69. Which of the following statement is true concerning acute, fulminant hepatic failure?
a) The most frequent cause of acute hepatic failure world-wide is hepatitis B infection
b) Higher grades of encephalopathy are associated with a worse prognosis
c) Hypo glycemia is a common complication
d) Liver transplantation would appear indicated in all patients with hepatic coma secondary to acute liver failure

Answer: b

Acute Fulminant Liver Failure:

- Encephalopathy within eight weeks of the onset of symptoms.
- The overall prognosis is poor,
- Potentially reversible,
- Recovery can lead to restoration of normal liver function
- The most frequent cause of acute hepatic failure world-wide is non-A, non-B viral hepatitis.
- A variety of other viral agents and hepatotoxins can also cause this condition.
- Higher grades of encephalopathy (depth of coma) are associated with the worst prognosis.
- **Hypo glycemia is an unusual complication of most liver diseases except in patients with acute hepatic failure or hepatic neoplasms**
- Bleeding is also a frequent cause of death in patients with acute hepatic failure secondary the depressed liver synthesis of clotting factors and qualitative or quantitative platelet disorders.
- Mild to moderate degrees of coma are likely to recovery spontaneously without the need for liver transplantation
- While rapid deterioration and neurologic status to grade iii or grade iv coma are associated in some centers with a mortality of 95%.

70. Liver tissue is obtained at necropsy and massive hepatocyte apoptosis is observed. Which of the following signaling pathways was activated by the intravenous administration of this substance?
a) TNF-R1 and TNF-α.
b) NF-κB.
c) FasL and Fas.
d) TRAIL-R2 and TRAIL.

Answer is c

- FasL was given intravenously in this experiment and resulted in massive hepatocyte apoptosis and fulminant hepatic failure.
- FasL binds and activates its cognate cell surface receptor Fas with subsequent
  - activation of caspase 8,

- cleavage of Bid,
- activation of Bak and Bax,
- mitochondrial permeabilization, and
- apoptosis.

71. False statement regarding Crohn's Disease stricture is

a. Strictures less than 4 cm are treated by Heinkemickuliczstricturoplasty
b. Dilated bowel proximal to stricture we can do Heinkemickuliczstricuturoplasty
c. For Stricture > 4cm – Finney's type Side to side procedure done
d. Side to Side Isoperistaltic stricturoplasty is ideal for Long Strictures >20 cm

Ans. B. Dilated bowel proximal to stricture we can do Heinkemickuliczstricuturoplasty (Ref. Shackelford 8th Edition Page 1943-44)

Types of Stricturoplasty:

- <4cm: HeinckeMickulicz type
- > 4cm: Finney's Type
- Stricture with proximal dilatation: Moskel-Walske-Neumayerstrictureplasty in which a Y shaped incision made
- Stictures> 20 cm length: Michellasi Side to side Isoperistaltic Technique

72. The initial step in Carcinogenesis of Colon Cancer is

a. Activating mutation in Kras gene
b. Disruption of TGF -alpha
c. Wnt signalling inactivation
d. Allelic loss of P53

Ans. C. Wnt signalling inactication (Ref. Shackelford Page 1959)

Chromosomal Instability(CIN)

- The first step in the CIN pathway is inactivation of the WNT signaling pathway,
- Second step is activating mutations in key growth-stimulating genes, such as *KRAS*, *CDC4*, *PIK3CA*,
- Third step is disruption of the negative growth regulatory network of transforming growth factor (TGF)-β signaling (typically through inactivation of one or more of the SMAD genes),and allelic losses of the *p53* (TP53) gene,

More than half of all CRCs develop through this pathway. There is considerable heterogeneity in the evolution of this pathway, and only three of these, *APC*, *KRAS* and *p53*, are mutated in greater than 11% of all CRCs.

The initial genetic alteration in the classic pathway is inactivation of the WNT signaling pathway, which is a key concept for understanding familial adenomatous polyposis (FAP).

- This usually occurs by biallelic inactivation of the *APC* gene, removing the protein that regulates the intracellular concentration of **β-catenin,** which is a transcription factor that helps turn on the growth program, and it is also involved in the intercellular adhesion complex that holds colonic epithelial cells together.
- Same effect can be achieved through a **stabilizing mutation in the β-catenin gene** that renders the protein incapable of being degraded by the adenomatous polyposis coli (APC) protein.

73. Regarding prophylactic Colectomy in Familial Adenomatous polyposis during colonoscopy- False statement is:

a. Profuse polyposis > 1000 polyps must undergo surgery in months time
b. Mild 100-1000 polyposis must undergo in 1 year
c. Presence of desmoid disease operate immediately
d. Large Adenomas > 1cm – multiple in number needs surgery in 3 months

Ans. C. Presence of Desmoid disease operate immediately (Ref. Shackelford 8th Edition) Page 1965)

TABLE 165.3 Timing of Prophylactic Colectomy

Urgency	Timing	Indication
Immediate	Next available list	Cancer Symptoms Complications of colonoscopy
Soon	Within 3 months	Profuse polyposis (>1000 adenomas) Multiple large (>1 cm) adenomas High-grade dysplasia in an adenoma
Sometime	On a year-by-year basis	Mild polyposis (100–1000 adenomas) Asymptomatic Social, intellectual, academic, financial, family factors
Defer	Put off as long as possible	High risk of desmoid disease High comorbidity

74. Stage 3 Desmoid correct statement is:

a. Size 11-20 cm
b. Size < 10 cm
c. Severe symptoms are present
d. > 50% growth in 6 months

Ans. A Size 11-20 cm (Ref. Shackelford Page 1966, 8th edition)

TABLE 165.5 A Staging System for Intraabdominal Desmoid Disease

Stage	Size	Symptoms	Growth
I	<10 cm	None	None
II	<10 cm	Mild	<25% in 6 months
III	11–20 cm	Moderate	25% to 50% in 6 months
IV	>20 cm	Severe	>50% in 6 months

Note: Many patients have multiple desmoids. The worst stage is taken for treatment planning.

75. Regarding the Desmoid disease in FAP- False statement is

a. It is the 2nd Most common cause of death in these patients
b. Desmoids are more common in males
c. Mutations in 3'end 1400 codon causes severe desmoid tumors
d. Desmoid is present in 30% of FAP cases

Ans. B. Desmoids are more common in males (Ref. Shackelford 8th Edition Page 1968)

The risk factors predicting the possibility of desmoid disease:

- Sex (females twice as likely as males),
- Family history of desmoids,
- Extra-colonic manifestations of Gardner syndrome (epidermoid cysts, osteomas, extra teeth), and genotype.

Traditionally, the location of the *APC* mutation was believed to determine the likelihood of an FAP patient to develop desmoid disease, **but a recent Cleveland Clinic study showed that the location of the mutation does not predict the occurrence of desmoids, but rather predicts their severity****- tumors in patients with mutations at the 3 prime end of codon 1400 tend to have more severe disease

76. TAMIS procedure for cancer rectum- False statement is

a. Pneumorectum created upto 20 mmHg
b. Peritoneal entry is a risk factor and associated with increased risk of pelvic infection
c. The defect happening after opening can be left as such without closure
d. Bleeding is the most common complication associated with TAMIS

Ans. B Peritoneal entry is a risk factor and associated with increased risk of pelvic infection(Ref. Shackelford 8th edition page 1994)

- During TAMIS Peritoneal entry is a known risk (4%) in patients with anterior tumors located in the mid and upper rectum.
- Closure of the rectal wall must be performed by first closing the peritoneum and then the rectal wall. However, transient loss of pneumo-rectum may occur.
- Rarely, laparoscopic access is required to cleanse the pelvis, facilitate wall closure, or perform a leak test.
- Peritoneal entry has not been associated with increased pelvic infection or worse oncologic outcomes. Informed consent in patients at risk of peritoneal entry should be strongly considered.

77. STAMPEDE study is associated with
a. A LSG
b. B RYGB
c. C BPD
d. D DS

Ans- A LSG

Ref- Shackelford pg 744

- Prospective randomized studies have demonstrated that LSG can produce excellent resolution of medical problems and weight loss. The STAMPEDE study at 5 years showed that LSG produced resolution of type 2 diabetes in 24% of patients versus 5% in the medical treatment arm.
- The Swiss randomized trial confirmed LSG produces comparable weight loss to LRYGB. A recent review of the literature suggested LSG can achieve the same remission for type 2 diabetes as LRYGB, although prospective trials still show an advantage of LRYGB for this disease.

78. False regarding Duodenal switch operation
a. Cholecystectomy is done as a part
b. Duodeno ileostomy is done as a part
c. Appendicectomy is done as a part
d. Length of common channel is the main difference from BPD

Ans- D Length of common channel is the main difference from BPD (Ref- Sabiston pg 172)

Explanation - Gastric sleeve is the main difference from BPD

- The DS configuration is shown in Figure . This modification was developed to help lessen the high incidence of marginal ulcers after BPD. The mechanism of weight loss is similar to that of BPD.
- An appendectomy is followed by measurement of the terminal ileum. Notably in the DS procedure, the common channel is 100 cm and the entire alimentary tract is 250 cm. However, the major difference between DS and BPD is the gastrectomy and the proximal anatomy. Instead of a distal hemigastrectomy, a sleeve gastrectomy of the greater curvature of the stomach is performed.
- This procedure is done as the initial part of the operation because if the patient exhibits any intraoperative instability, the operation can be discontinued after the sleeve gastrectomy alone.

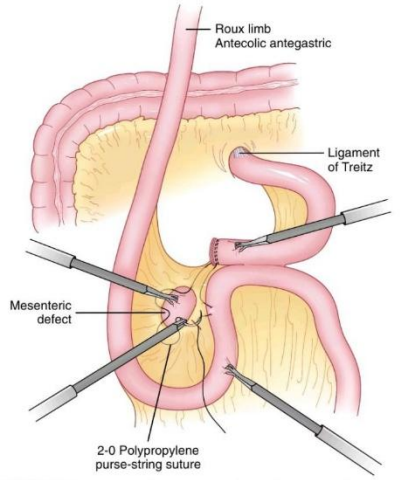
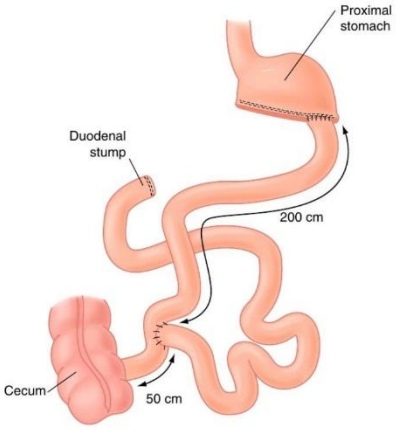


FIGURE 47-15 Closure of mesenteric defect using purse-string suture of 2-0 polypropylene.



Alimentary channel = 250 (± 50) cm
Common channel = 50 cm

FIGURE 47-16 Anatomic configuration of biliopancreatic diversion.

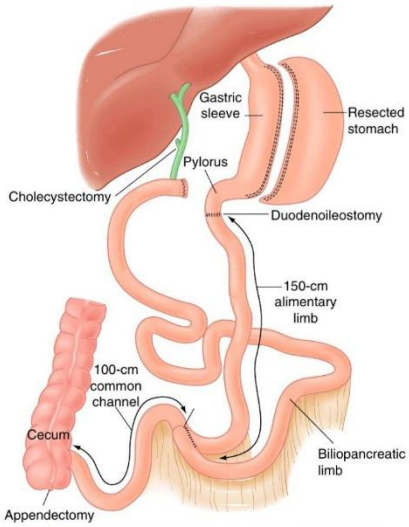


FIGURE 47-17 Anatomic configuration of the duodenal switch.

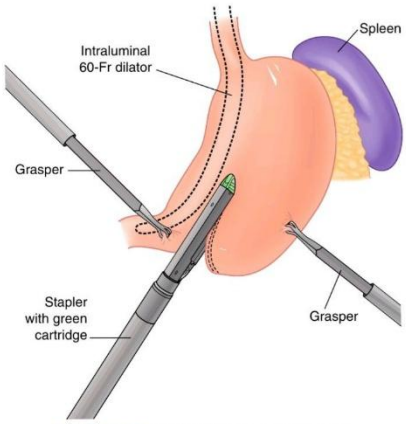


FIGURE 47-18 Creation of the sleeve gastrectomy.

79. False regarding LSG

a. Achilles heel of LSG is leak
b. Evolved from Magenstrasse and Mill operation
c. Left gastric artery is preserved
d. Leak rates are lesser than Lap RYGB

Ans- D Leak rates are lesser than Lap RYGB

Ref- Sabiston pg 1174, Bailey pg 1148

- Leaving intact the tissue within 3 cm of the pylorus and up to the angle of His and exposing the left crus of the diaphragm.
- Then, with use of a 32 Fr to 40 Fr bougie, the stomach is divided from the antrum to the angle of His by sequential firings of the stapler.
- It is vitally important in this procedure to preserve the left gastric vessels and lesser curve blood supply and to prevent twisting or spiraling of the gastric tube.
- Most surgeons routinely suture the staple lines to reinforce the integrity and use some form of staple line reinforcement to prevent bleeding or leaks from the staple line.
- Disadvantages of the procedure seem to focus on the Achilles heel of the operation, which is a leak along the long gastric staple line.

- Whereas a leak after gastric bypass is one of the most feared complications, leaks after **LSG appear to be slightly more common**** than in laparoscopic RYGB and more difficult to treat.
- The leaks are most likely to be located in the proximal third of the stomach
- This operation is less challenging to perform than gastric bypass.
- It evolved from the Magenstrasse and Mill operation, where the divided fundus (the 'mill') was left in continuity with the lesser curve-based tube (the 'main street'). At the same time, it was acting as the first step of the DS operation and proving to be effective on its own.

80. According to European Hernia Society, L2 denotes which of the following subtype of lateral hernia

a) Subcostal
b) Iliac
c) Lumbar
d) Flank

Ans- D Flank

Ref- Shackelford page 549

TABLE 50.1 European Hernia Society Classification of Incisional Hernia

Midline hernias	Subxiphoid	M1	From the xiphoid process to 3 cm caudally
	Epigastric	M2	From 3 cm below the xiphoid process to 3 cm above the umbilicus
	Umbilical	M3	3 cm above the umbilicus to 3 cm below the umbilicus
	Infraumbilical	M4	From 3 cm below umbilicus to 3 cm above pubis
	Suprapubic	M5	From the pubic bone to 3 cm caudally
Lateral hernias	Subcostal	L1	Between the coastal margin and the horizontal line 3 cm above the umbilicus
	Flank	L2	Lateral to the rectus sheath in the area 3 cm above and below the umbilicus
	Iliac	L3	Between a horizontal line 3 cm below the umbilicus and the inguinal region
	Lumbar	L4	Lateral and dorsal to the anterior axillary line

RRM'S NEET SGE Mock exam

81. According to STITCH Trial, which of the following statement is true

a) Short stitch has increased hernias rate
b) Long stitch has decreased hernia rates
c) No difference between short and long stiches in SSI rates
d) Long stich technique has longer operative time

Ans- C No difference between short and long stiches in SSI rates

Ref- Shackelford page 553

- In a multicenter randomized controlled trial in Europe (STITCH trial), 609 patients were randomly assigned to undergo a **large stitch or small stitch laparotomy closure**, and were followed for a year with either physical examination or ultrasound.
- In these matched cohorts based upon Age, Gender, BMI, comorbid conditions, type of surgery including colorectal, upper GI, gynaecologic, or vascular, the large stitch patients had fewer numbers of stitches (25 vs. 45) and shorter overall suture length used (95 vs.110 cm) for equivalent laparotomy lengths.
- The ratio of suture to length of wound was longer in the small stitch (5 vs. 4.3), and the operative duration required to perform the short stich closure was 4 minutes longer in the small stitch cohort.
- **Postoperative complications were no differen**t, morbidity (ileus, cardiac, pneumonia), SSIs, rate of burst abdomen (1%), and hospital length of stay.
- **Hernia rates were greater in the large stitch versus short stitch groups (21% vs. 12%).** While the STITCH study demonstrated a reduction in hernia rates with the short stitch technique, no reduction in SSI rates were seen.
- While this study clearly demonstrates the benefits of technique upon incisional hernia rates, the mean BMI of patients enrolled in the STITCH trial is 24 kg/m 2 , and the technique has not been demonstrated to be effective in obese populations.

82. False statement regarding Omental torsion

a) Primary omental torsion usually involves the left side of the omentum
b) Palpation of the abdomen suggests peritonitis
c) The differential diagnosis includes acute appendicitis, acute cholecystitis, and torsion of an ovarian cyst
d) Serosanguineous fluid is often present in the peritoneal cavity

Ans- A Primary omental torsion usually involves the left side of the omentum

Ref- Sabiston page 1082

- Torsion of the greater omentum is defined as the axial twisting of the omentum along its long axis.
- If the twist is tight enough or the venous obstruction is of sufficient duration, arterial inflow will become compromised, leading to infarction and necrosis.
- Omental torsion is classified as primary when no coexisting causative condition is identified or secondary when the torsion occurs in association with a causative condition, such as a hernia, tumor, or adhesion.
- Primary omental torsion usually involves the right side of the omentum.
- Omental torsion occurs twice as often in men as in women and is most frequent in patients in their fourth or fifth decade of life.
- Patients present with the acute onset of severe abdominal pain localized to the right side of the abdomen in 80% of patients.
- Nausea and vomiting may be present but are not predominant findings.
- The patient's temperature is usually normal, and palpation of the abdomen demonstrates localized abdominal tenderness with guarding, suggesting peritonitis.
- A mass may be palpable if the involved omentum is sufficiently large.
- The differential diagnosis includes any disease associated with right-sided abdominal pain and tenderness, most notably acute appendicitis, acute cholecystitis, and torsion of an ovarian cyst.
- CT often demonstrates an omental mass with signs of inflammation.

- Usually, the patient's clinical presentation justifies laparotomy or laparoscopy, at which time a segment of the omentum appears congested and acutely inflamed. Serosanguineous fluid is often present in the peritoneal cavity.
- Treatment consists of resection of the involved omentum and correction of any related condition.

83. In Which of the following type of Retroperitoneal sarcomas, palliative incomplete resection can be attempted

a) Leiomyosarcoma
b) Liposarcoma
c) Malignant Fibrous Histiocytoma
d) Angiosarcoma

Ans- B Liposarcoma

Ref- Sabiston page 1089

- There is no difference in survival for patients who undergo incomplete resection compared with those who are unresectable.
- Incomplete resection should be undertaken only for palliative purposes for all histologic types other than liposarcoma.
- Incomplete resection of well-differentiated liposarcoma may prolong survival and has been shown to improve symptoms.

84. False statement related to Extra Levator APR (ELAPE) is

a. Levator muscles are attached to rectum in specimen
b. Cylindrical shape specimen obtained
c. ELAPE has lower rates of positive Circumferential resection margin
d. ELAPE has higher rates of intraoperative rectal perforation

Ans. D.ELAPE has higher rates of intraoperative rectal perforation

E**xtra Levator Abdominal Perineal Excision:**

- In an extralevator APE, the levator muscles are leftattached to the rectum, and the resulting surgical specimen has a cylindrical appearance
- Extralevator APEhad lower rates of intraoperative rectal perforation, positiveCRM, and local recurrence but similar complication ratescompared with patients who underwent standard APE

85. False statement regarding BanayanRuvalcaba Syndrome associated Colonic Polyposis:

a. Patients have Macrocephaly
b. Pigmented Macules in Glans penis seen
c. The polyps needs surgery as there is risk of cancer
d. Regular surveillance is needed

Ans. C. The polyps needs surgery as there is risk of cancer

- BRRS, like CS, is an autosomal dominant disorder characterized by multiple phenotypic abnormalities and hamartomas in the intestine and other tissues.
- Macrocephaly, hamartomatous colonic polyposis, lipomas, and pigmented macules of the glans penis are common.
- Less common manifestations include Hashimoto thyroiditis, vascular malformations, and mental retardation.. **The intestinal polyps are most commonly juvenile polyps, which develop early in life and may contain adenomatous dysplasia**.

- BRRS is not often associated with an increased cancer risk, although the multiple colorectal polyps may be symptomatic (intussusception and obstruction).
- While surgery for CRC is rare in patients with BRRS, patients may need a colectomy or at least a polypectomy for the symptoms caused by the polyps.
- The possibility of adenomatous dysplasia in the juvenile polyps suggests that regular surveillance is indicated.

86. In related to Bowel preparation for Colon surgery- which is the true statement:

a. Mechanical bowel preparation is not much beneficial
b. Oral antibiotics as prophylaxis is better than Systemic Antibiotics combination
c. Oral antibiotics are given before mechanical preparation
d. Current recommendation is to give mechanical preparation with oral and systemic antibiotics

Ans. D. Current recommendation is to give mechanical preparation with oral and systemic antibiotics (Ref. Shackelford page 2165)

- Clinical evidence currently supportsthe use of MBP in combination with oral antibiotic bowelpreparation and in conjunction with systemic preoperativeantibiotics in preventing SSIs.
- Timing isalso of importance because administration of the oralantibiotics before the mechanical preparation is completewill likely result in the antibiotics passing through thecolon with no benefit to the patient. Hence give oral antibiotics after PEGLEG solution is given.

87. In Non acetaminophen induced Acute Fulminant liver failure- King's college criteria includes following factors except

a. Prothrombin time > 100 seconds
b. Age < 10 or > 40 years
c. Serum Creatinine > 300 micromol/litre
d. Encephalopathy developing

Ans. C. Serum Creatininte> 300 Micro mol/ litre

<u>Non-acetaminophen:</u>

- Prothrombin time > 100 seconds (irrespective of grade of encephalopathy)
  OR
- Any three of the following (irrespective of grade of encephalopathy)
- Non-A, non-B hepatitis (cryptogenic), halothane hepatitis or other drug toxicity
- Age < 10 years or > 40 years
- Jaundice to encephalopathy interval > 7 days
- Prothrombin time > 50 seconds
- Serum bilirubin >300 um/L

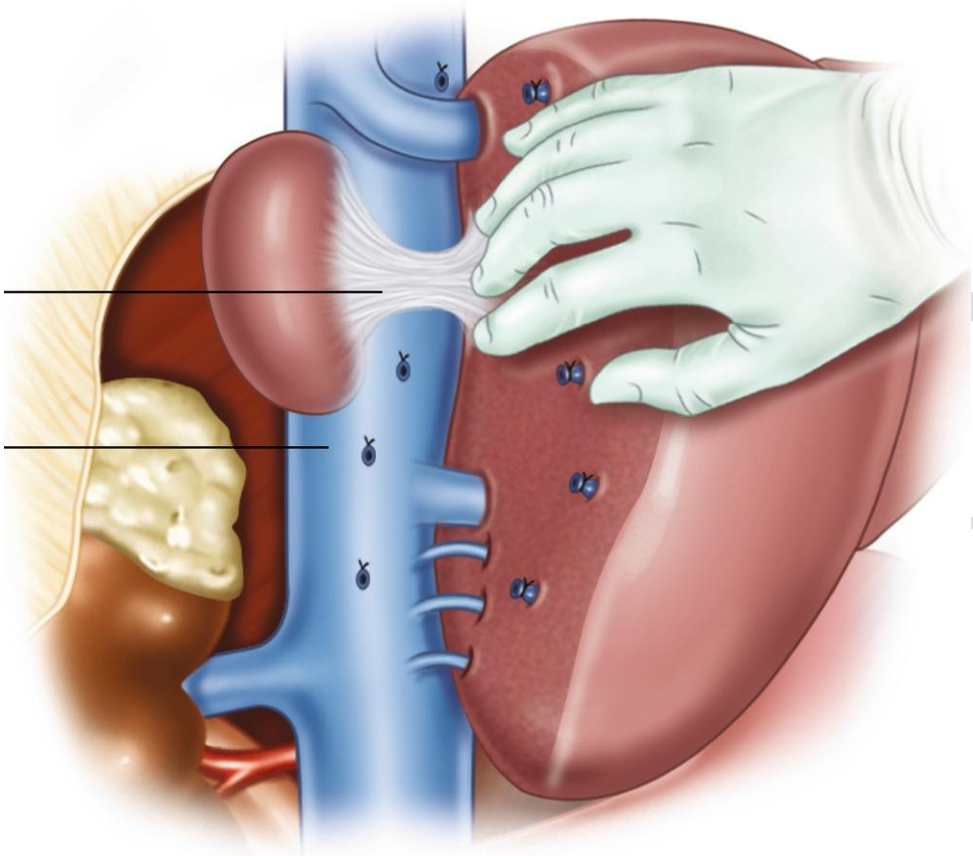
88. A 6 cm GIST resected from ileum. HPE showed low mitotic count-2/50 HPF. What is the next appropriate line of management?

a. Observation and surveillance
b. Imatinib 400 mg for 3 years
c. Imatinib 600 mg for 1 year
d. Imatinib 400 mg for 1 year

Ans: b Imatinib 400 mg for 3 years
Ref: Shackelford 7th edition chapter 81

- Size and site accounts for intermediate risk and needs adjuvant imatinib therapy. Standard dose unless mentioned is 400 mg for 3 years

89. This ligament in the posterior aspect of liver traverses between



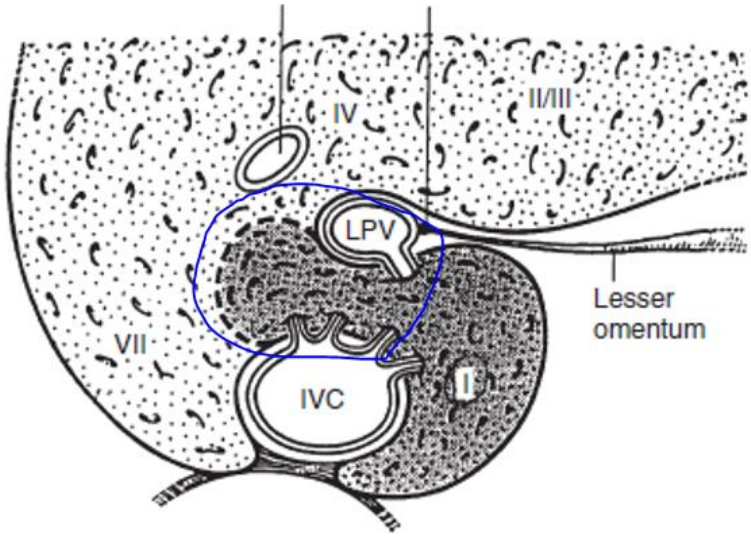
a) Dorsal edge of Left side of caudate to right liver
b) Ventral edge of Left side of caudate to right liver
c) Dorsal edge of right side of quadrate lobe to left liver
d) Ventral edge of right side of quadrate lobe to left liver

Ans: Dorsal edge of Left side of caudate to right liver

- The picture shows liver from posterior and IVC seen from behind
  Ref: Blumgart 6th edition page 32.

90. Segment 9 of the liver includes which of the following?

a) Caudate lobe
b) Spigelian lobe
c) Paracaval portion and caudate process
d) Quadrate lobe



Ans: C . Paracaval process and caudate process

There is a caudate lobe with a constantly present left portion and a right portion of variable size. This portion of the caudate on the right is adjacent to the recently described segment IX consisting of paracaval process and caudate process (Ref: Blumgart 6th edition page 62)

91. Regarding Liver generation, which is true?

a. Hepatic progenitor cells from canaliculi are responsible for regeneration post massive acute necrosis
b. Kupffer give initial stimulus to HCs and other cells for regeneration
c. Liver requires excess blood flow during regeneration
d. Regeneration progresses from pericentral to Periportal region

Ans: B

Ref: Blumgart 6th edition page 129

- Usually remaining hepatocytes enter from G0 phase to replicate rather than progenitor cells. Initial stimulus comes from Kupffer cells for induction.
- Normal blood flow is sufficient and excess blood flow is not required, although nutrient requirement is increased.
- Since nutrition status is more near portal venules, Periportal cells proliferate followed by pericentral cells

92. A 40 years female presents with vague right upper abdominal mass. USG abdomen shows left liver solid cystic SOL with segmental IHBRD, with normal LFT. MRI abdomen is advised to characterize the SOL. Which of the following MR contrast agents is not suitable to appreciate biliary system?

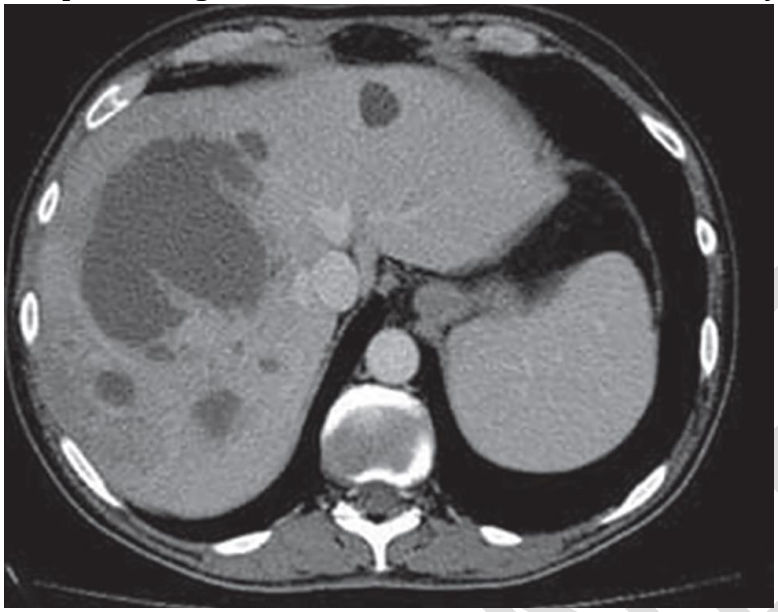
a. Gadoxetic acid
b. Mangofodipir
c. Gadobenate
d. Gadopentetate

Ans: D

Ref: Blumgart 6th edition- page 360

- ECF agents, such as gadopentetate dimeglumine (gadolinium diethylene triamine penta acetic acid [Gd-DTPA]), which is distributed within the intravascular compartment initially and rapidly diffuses through the extravascular space, similar to the action of iodinated contrast agents in computed tomography.
- Other agents have dual ECF phase and hepato biliary pancreatic phase.

93. A 50 years male presenting with severe fever and chills with rigors for 3 days. CT abdomen of this patient is given. What is the most common laboratory abnormality in this condition?



a. Alkaline phosphatase
b. Elevated PT/INR
c. Leucocytosis
d. Hypoalbuminemia

Ans: a. Elevated alkaline phosphatase
Ref: Bailey and Love 27th edition page 1170

- MC abnormality in Amoebic liver abscess is deranged PT/INR

94. An alcoholic cirrhotic patient had progressive decompensation, which of the following is not used as a prognostic index of liver outcome?

a. UCSF
b. BCLC
c. CLIP
d. WHO-IWGE

Ans: a UCSF
Ref: Bailey and Love 20th edition. Chapter-65 page-1174

- UCSF (University of California San Francisco) is an extended criteria for selecting patients for liver transplant and not a prognostic index

95. A 50 year old male presented with vague abdominal pain in epigastric region with early satiety. His hydatid serology was normal. MR shows following features. What is the treatment of choice?

a) Resection
b) Cystoenterostomy
c) Aspiration
d) Sclerotherapy

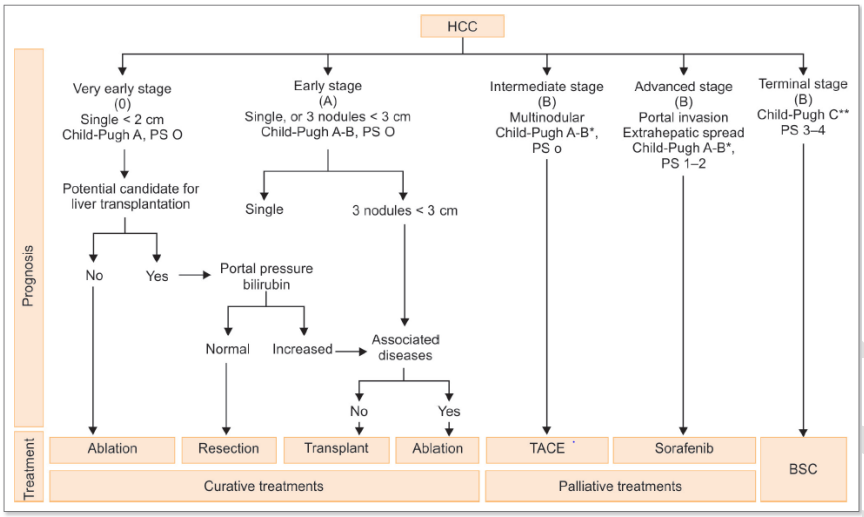
Ans: d. sclerotherapy. Fenestration if present would be appropriate. But sclerotherapy with sclerosant is equally effective after aspiration.

Ref: Blumgart 6th edition page- 1287

96. A 4.5 cm solitary segment 4 SOL in a HCV related Child A cirrhosis patient. What is the treatment of choice?

a) RFA
b) Sorafenib
c) Resection
d) TACE

Ans: c-Resection
Ref. BCLC classification Bailey and Love 27th edition figure 67-24



Note if liver transplant option was provided, that will be appropriate

97. False regarding immunosuppressant

a. Mycophenolate mofetil is a reversible inhibitor of Inosine Mono Phosphate Dehydrogenase
b. Both Cyclosporine and tacrolimus inhibit NF-KB and its downstream effects
c. Everolimus acts on FKBP12 to inhibit Calcineurin
d. ALG are more used in pancreas transplant

Ans: C

Ref: Blumgart 6th edition- chapter 111; page 1734

- Unlike tacrolimus, everolimus, do not affect calcineurin activity.
- The primary effect of mTOR inhibitors is to inhibit IL-2 receptor signal transduction and not to block NF-AT nuclear translocation; therefore T cells are rendered incompetent against the proliferative effects of exogenous IL-2 but are still capable of IL-2 gene transcription.

98. A 40-years-female presents with severe right hypochondrial pain, she has Gallbladder stones with pericholecystic edema on USG. On examination she had Murphy's sign +, WBC count was 19000/mm3 , Temperature 102°, Pulse rate 120/ minute, Serum creatinine >3 mg/dl, bilirubin-1.6 mg/dL, PT elevated. What is the treatment of choice?

a. Emergency cholecystectomy
b. Hydration and antibiotics followed by cholecystectomy after 72 hours
c. Percutaneous cholecystostomy
d. Resuscitate and urgent ERC

Ans: c. percutaneous cholecystostomy

Ref: Bailey and Love 27th Edition page 1200. Patient unfit for major procedure

Tokyo Consensus Guidelines for Severity grading of Acute Cholecystitis: Grade III (Severe) Acute Cholecystitis: Associated with any one of the following organ dysfunction:

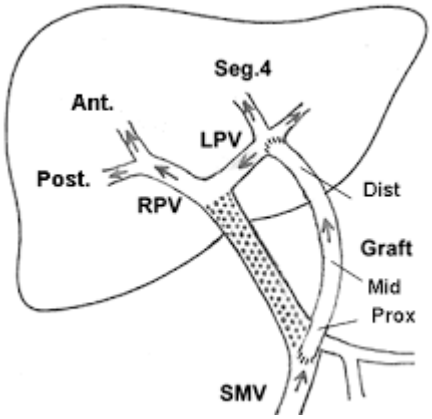
- CVS: Hypotension requiring Dopamine or Noradrenaline
- Neurological: Decreased consciousness level
- Respiratory: Pa02/Fi02 ratio 2 mg/dl
- Liver dysfunction: PT – INR elevated
- Hematological Dysfunction: Platelet count

99. The classical triad of acute Budd-Chiari syndrome (BCS) is

a. Abdominal pain, Ascites, Hepatomegaly
b. Abdominal pain, Jaundice, Hepatomegaly
c. Abdominal pain, Ascites, Jaundice
d. Jaundice, Ascites, Hepatomegaly

Ans: b. Abdominal pain, Ascites, Hepatomegaly
Ref: Schwartz's Principles of Surgery 10th Edition – Page 1283
Shackelford's Surgery of the Alimentary Tract - 7th Edition – Page 1547

100. Name the shunt depicted below in this picture and in which surgery this was first described?



a) Meso-Rex shunt and EHPVO
b) Cavo mesenteric shunt and EHPVO
c) Meso Rex shunt and post-transplant acute PV thrombosis
d) Meso rex shunt and NCPF

Ans- c. Meso Rex shunt and post-transplant acute PV thrombosis
EHPVO was an extrapolation from original procedure. It is physiological because of direction of flow of blood
Ref- Blumgart 6th edition page-1486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