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SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY,
THIRUVANANTHAPURAM—695 011

ENTRANCE EXAMINATION: ACADEMIC SESSION JANUARY 2020

PROGRAM: Mch (Vascular Surgery)

Time: 90 minutes

Max. Marks: 100

(Select the most appropriate answer)

(There are no negative marks for wrong answers)

- 1) All of the following are valid treatment options for type 1 endoleaks after endovascular aneurysm repair, EXCEPT
 - a. Implantation of a proximal cuff
 - b. Repeat ballooning of landing zones
 - c. Observation followed by intervention if persistent
 - d. Conversion to open surgery
- 2) Which of the following strategies has been shown NOT to so important in prevention of spinal cord ischemia (SCI) after thoracoabdominal aortic aneurysm repair?
 - a. Insert a passive spinal fluid drainage prophylactically.
 - b. Have a proactive aggressive hemodynamic control intra- and postoperatively.
 - c. Keep the femoral introducer sheaths post op to identify early lower limb and hypogastric hypoperfusion, which indirectly detects the spinal cord ischemia
 - d. Adapt an intensive postoperative protocol aiming at the early identification of upcoming neurological deficits.
- 3) Which of the following is NOT useful in the diagnostic workup of a suspected graft infection?
 - a. CRP
 - b. Contrast-enhancedCT
 - c. (99m) Tc-pyrophosphatescintigraphy
 - d. Microbiological culture, obtained by open biopsy
- 4) Which statement regarding renal artery stenosis is correct?
 - a. Should be treated when pressure gradient is 15mmHg or less.
 - b. Does not lead to activation of the intrarenal renin-angiotensin system.
 - c. Renal atheroembolization may occur in association with aortic atherosclerosis.
 - d. More than 85% of patients show a reduction in blood pressure after renal artery stenting

- 5) In patients who develop a documented episode of deep vein thrombosis of lower limb, the most common long-term sequela is?
- Recurrent DVT
 - Development of stasis ulcer
 - Pulmonary Embolization
 - Diminished Arterial perfusion
- 6) A Juxta-renal abdominal aortic aneurysm is defined as?
- One of the two renal arteries arising from aneurysm
 - Both renal arteries arising from aneurysms
 - Aneurysm closely abutting but not involving renal ostia
 - Aneurysm involving all the viscera-renal arteries
- 7) May-Thurner-Cockett syndrome is?
- DVT of Left iliac vein due to compression by left iliac artery
 - DVT of Right iliac vein due to compression by right iliac artery
 - DVT of Left iliac vein due to compression by right iliac artery
 - DVT of Right iliac vein due to compression by left iliac artery
- 8) Lytic therapy in Pulmonary Embolism:
- Should precede anticoagulation
 - Can be considered for all patients with pulmonary embolism
 - Intracranial surgery with in last 1 year is an absolute contraindication for lytic therapy
 - Can be considered for hemodynamically unstable patients
- 9) What is not a common feature of Takayasu arteritis?
- Female preponderance
 - Occlusive lesions of brachio-cephalic vessels
 - Elevated ESR
 - Intracranial aneurysms
- 10) Which of the following true regarding PTFE prosthetic vascular grafts?
- Are a variant of woven textile graft
 - Provide patency superior to than of Dacron graft for supra inguinal revascularisation
 - Provide patency equal to that of autogenous venous graft in supra genicular bypass
 - More resistant to infection than Dacron graft

- 11) Which ONE of these statements is correct regarding treatment of aortic branch origin stenosis or occlusion?
- Extra-thoracic approaches have the highest morbidity.
 - Transthoracic approaches have the highest mortality
 - Endovascular approaches have the highest long-term patency
 - Endovascular approaches are preferred as the last resort after treatment failures
- 12) The most devastating complication of descending thoracic aneurysm repair is?
- Recurrent nerve injury
 - Bleeding with hemothorax
 - Paraplegia
 - Renal Insufficiency
- 13) Most common cause for left subclavian artery aneurysm is.
- Takayasu arteritis
 - Atherosclerosis
 - Cervical rib with thoracic outlet syndrome
 - Traumatic fracture of clavicle/ 1st rib
- 14) Renal artery aneurysm most commonly occur at-
- Renal artery bifurcation
 - Origin of the renal artery
 - Intra renal branches
 - In polar renal artery
- 15) The incidence of inflammatory aneurysms among all infra renal abdominal aortic aneurysm is-
- <5%
 - 10%
 - 25%
 - 30%
- 16) What symptoms are considered the classic presenting triad for ruptured abdominal aortic aneurysm (rAAA)?
- Abdominal/back pain, shortness of breath, and a pulsatile mass.
 - Abdominal/back pain, syncope, and a pulsatile mass.
 - Abdominal/back pain, nausea, and syncope.
 - Abdominal/back pain, chest pain, and hematochezia.
- 17) Which ONE of the following sets is NOT part of the Villalta score, which helps to quantify clinical morbidity from lower limb DVT?
- Pain, Cramps, Heaviness
 - Paraesthesiae, Pruritus
 - Pretibial edema, hyperpigmentation, venous ectasia
 - Lipodermatosclerosis, atrophie blanche

- 18) Following is the disadvantage of ultrasound guided compression for treatment of post puncture, femoral artery pseudoaneurysm EXCEPT-
- Thrombosis of the underlying artery is a frequent complication
 - Most patients find it painful
 - Approximately 30% of successfully thrombosed false aneurysms recur
 - May require general anaesthesia or epidural anaesthesia
- 19) DISSECT classification is used to describe
- Ruptured abdominal aortic aneurysm
 - Thoracic aortic aneurysm
 - Type B Aortic dissection
 - Precursor lesions of aortic dissection (Penetrating aortic ulcer, IMH)
- 20) A 23y old college going girl presented with c/o left upper limb numbness while working. Clinically the left upper limb pulse is absent. B/l carotid bruit is present along with tenderness on palpating the left carotid pulse. Ct angiogram shows left SCA short segment occlusion with distal reformation and b/l CCA stenosis at origin. What is the next best management for this girl?
- Needs angioplasty of the left SCA and b/l CCA since the patient is symptomatic
 - Needs Ascending aorta b/l CCA and Left SCA bypass
 - To start Steroids based on disease activity
 - Anticoagulation alone is needed
- 21) What are the long-term results of surgical decompression of the thoracic outlet area?
- 90% success
 - 75% success
 - 60% success
 - 40% success
- 22) Leg ulceration is most commonly caused by...
- Trauma
 - Chronic venous insufficiency
 - Bacterial infections
 - Peripheral artery occlusive disease
- 23) Which ONE of the following represents the most common cause of vascular dialysis access thrombosis?
- Anastomotic disruption
 - Myointimal hyperplasia
 - Poor cannulation
 - Surgical technique

- 24) Which of the following cannot be used as conduit in open surgical management of the SVC syndrome?
- The great saphenous vein
 - 20 mm ringed PTFE diameter Dacron graft
 - Spiral venous graft
 - Femoral vein
- 25) What is the time interval between aortic surgery and the presentation of an aortoenteric fistula?
- It usually occurs in the first 48 h following aortic surgery.
 - It typically presents within the first month following the operation.
 - It may only occur after 5 years following the placement of the aortic synthetic graft.
 - It may present at any time during the lifetime of the patient after the placement of the synthetic aortic graft.
- 26) Which of the following is not a characteristic finding in patients with Klippel-Trenaunay Syndrome?
- High-flow arteriovenous shunting
 - Long bone hypertrophy
 - Lateral varicosity
 - Port wine nevus
- 27) Which of the following statements about lytic agent is TRUE?
- They were first introduced well after the advent of balloon embolectomy
 - Streptokinase use is the most effective means of delivery
 - Systemic use is the most effective means of delivery
 - The interval to reperfusion limits their utility in the treatment of advanced ischemia
- 28) Which of the following is the least reliable indicator of successful thrombectomy?
- Vigorous back-bleeding after removal of thrombotic material
 - Arteriographically demonstrated patency of all runoff vessels
 - Normal distal pulses after the procedure
 - Return of normal skin colour and temperature.
- 29) Which of the following is NOT an absolute indication for an IVC filter?
- Complication or contraindication to anticoagulation in a patient diagnosed with a pulmonary embolism
 - Recurrent thromboembolism despite therapeutic anticoagulation
 - Acute iliofemoral DVT with extension to IVC
 - Recurrent pulmonary embolism with pulmonary hypertension

- 30) Which of the following statements about atherosclerotic obstruction of the renal arteries is TRUE?
- Lesions are usually short
 - These lesions are usually found in the distal renal arteries, particularly just beyond branch points
 - Ostial lesions are best treated with balloon angioplasty
 - Lesions of this type are the second most common cause of renal artery stenosis
- 31) A 45/M, tennis player by profession, presented with acute onset of Rt upper limb swelling. Clinically all peripheral pulses present. Edema of the Rt arm and forearm was present. Duplex was done which showed acute thrombosis of the Rt subclavian vein. What is the best management of him?
- Anticoagulation alone because of high recurrence after thrombolysis
 - Thrombolysis f/b emergency subclavian vein stenting
 - Thrombolysis f/b elective stenting in another setting if residual stenosis persists
 - Venous thrombectomy
- 32) Clinical features which would lead a clinician to suspect Renovascular hypertension include all EXCEPT:
- Patients with cardiovascular risk factors, e.g., smokers, type 2 diabetics, evidence of atheroma in other vascular beds
 - Rapid deterioration of previously well-controlled essential hypertension
 - Two-drug- (or more) resistant hypertension
 - Impaired renal function on commencement ACE inhibitors or ARBs
- 33) Which part of the bowel is involved in an aortoenteric fistula?
- Duodenum
 - Jejunum
 - Ileum
 - Any of the above could be involved
- 34) TESLA is the modality of treatment for management of which of the following?
- Penetrating Aortic Ulcer (PAU)
 - Mid Aortic Syndrome
 - Intra Mural Hematoma (IMH)
 - Takayasu Arteritis
- 35) Which of the following are "hard" signs of vascular injury?
- Absence of pulses.
 - Pallor or cyanosis.
 - Haematoma (large).
 - Bruit or thrill.

- 36) What is the reported average growth rate of small descending thoracic aortic aneurysms?
- 1mm per year
 - 3mm per year
 - 5mm per year
 - 7mm per year
- 37) Which among the following about carotid body tumour is NOT true?
- Malignancy is observed in 5% of the cases
 - Most common site of metastasis is Lymph node
 - Malignancy is detected based on the Histological features
 - In case of Shamblin III CBT, its not always needed to bypass External carotid artery along with Internal carotid artery
- 38) As per the Crawford classification of thoraco-abdominal aortic aneurysms, an aortic aneurysm extending from just beyond left subclavian artery to above renal artery origin is?
- Type I
 - Type II
 - Type III
 - Type IV
- 39) Carotid artery steno-occlusive disease most often produces symptoms (TIA/Minor stroke) by which of the following mechanism?
- Reduction of flow to the affected area of the brain through stenotic or occluded vessel
 - Embolization of atheromatous debris and/ clot into the intracranial vessels
 - Thrombosis and propagation of clot into intracranial vessels
 - All of the above are equally contributing
- 40) Which of the following endovascular technique is not useful as a treatment of chronic total occlusions of the superficial femoral artery?
- Subintimal angioplasty
 - Catheter directed thrombolysis
 - Directional atherectomy
 - Cryoplasty
- 41) A patient presents with gunshot injury to mid-neck. Patient exhibits not lateralizing neurological signs. After control of his airway is achieved, he is taken directly to the operating room for control of haemorrhage. The common carotid artery has 2cm destroyed segment. There is also a major oesophageal injury. The best treatment for this carotid injury is:
- Ligation of common carotid artery
 - Ligation of common carotid proximally with subclavian carotid bypass
 - Prosthetic graft replacement of common carotid artery
 - Vein graft replacement of common carotid artery

- 42) All of the following are NOT clinical features of Primary Raynaud's disease except-
- Presence of structural vascular changes
 - Absence of clinical features of Connective tissue disorder
 - Affects only hand and spares the feet/thumb
 - Development of digital ulcers
- 43) Who performed first carotid revascularisation procedure for symptomatic extra cranial carotid artery disease?
- Michael DeBakey
 - Eastcoat
 - Alexis Carrel
 - John Hunter
- 44) In acute limb ischemia, the sequence of events is:
- Pulselessness, pain, pallor, paresthesia, paralysis
 - Paralysis, pain, paresthesia, pulselessness, pallor
 - Pulselessness, pain, pallor, paralysis, paresthesia
 - Pulselessness, pain, paraesthesia, pallor, paralysis
- 45) What is the best treatment option of a popliteal aneurysm that presents with distal embolization and no runoff to the foot?
- Emergency popliteal and pedal thrombectomy, femoropopliteal bypass and aneurysm ligation
 - Initiation of thrombolysis that will allow clearance of the distal vessels and, depending on the outcome and runoff anatomy, open or endovascular repair of the aneurysm
 - Emergency endovascular repair of the aneurysm to prevent further Embolization
 - Emergency pedal thrombectomy, fem-pedal bypass and aneurysm ligation
- 46) Who received Nobel prize in Medicine (1912) for pioneering vascular suturing techniques?
- Michael DeBakey
 - Alexis Carrel
 - William Osler
 - John Hunter
- 47) Which is the most common type of thoracic outlet syndrome?
- Neurogenic
 - Arterial
 - Venous
 - All occur with equal frequency

- 48) Which of the following is a direct factor Xa inhibitor?
- Dabigatran
 - Fondaparinux
 - Apixaban
 - Dalteparin
- 49) String of Beads' sign on angiography is classically seen in which pathology?
- Takayasu arteritis
 - Thrombo-angitis obliterans
 - Fibro-muscular dysplasia
 - Giant cell arteritis
- 50) A Cimino-Brescia-Appel AV fistula is created between:
- Radial artery and cephalic vein
 - Radial artery and basilic vein
 - Brachial artery and cephalic vein
 - Brachial artery and basilic vein
- 51) All among the following causes Metabolic Acidosis EXCEPT-
- Renal failure
 - Ureterosigmoidostomy
 - Pancreatic or biliary fistula
 - Pyloric stenosis
- 52) Platelets can be stored at-
- 20-24°C for 5 days
 - 20-24°C for 8 days
 - 4-8°C for 5 days
 - 4-8°C for 8 days
- 53) A clean incised wound heals by-
- Primary intention
 - Secondary intention
 - Excessive Scar
 - None of the above
- 54) Which of the following is the most significant risk factor for development of gastric carcinoma-?
- Paneth cell metaplasia
 - Pyloric metaplasia
 - Intestinal metaplasia
 - Ciliated metaplasia

- 55) The site of bleeding in Gastro-oesophageal varices are all EXCEPT-
- Short gastric veins
 - Left gastroepiploic veins
 - Right gastric veins
 - Left gastric veins
- 56) Features of Hypovolemic shock are all EXCEPT-
- Oliguria
 - Bradycardia
 - Hypotension
 - Acidosis
- 57) A robust male baby with vigorous feeding and immediate vomiting at 2 months of age. Most probable diagnosis is-
- Paralytic ileus
 - Hirschprung's disease
 - Brain tumour
 - Congenital hypertrophic pyloric stenosis
- 58) Tumour marker for primary hepatocellular carcinoma are all EXCEPT-
- Alpha 2 macroglobulin
 - Alpha feto protein
 - PIVKA-2
 - Neurotensin
- 59) In Couinaud classification, segment IV of liver is-
- Caudate lobe
 - Right lobe
 - Left lobe
 - Quadrante lobe
- 60) Erysipelas is caused by-
- Staph aureus
 - Staph albus
 - Strep pyogenes
 - Hemophilus
- 61) Commonest indication for liver transplantation in infant is-
- Wilson's disease
 - Biliary Cirrhosis
 - Primary hemochromatosis
 - Biliary atresia

- 62) Which one of the following is not part of "Triple Therapy" in immunosuppression for post-renal transplant patients?
- Cyclosporin
 - Tacrolimus
 - Azathioprine
 - Prednisolone
- 63) All of the following are true about cryptorchidism EXCEPT:
- Cryptorchidism is a risk factor for testicular tumour
 - Seminoma is the most common tumour
 - Contralateral testis also at risk
 - Orchidopexy reduces the risk of malignancy
- 64) Most common site of intestinal obstruction in gallstone ileus is:
- Duodenum
 - Jejunum
 - Ileum
 - Sigmoid colon
- 65) A chronic alcoholic presents with abdominal pain radiating to the back that responds to analgesics. At evaluation the pancreatic duct was found to be dilated and stones were noted in the tail of pancreas. The most appropriate management is:
- Medical management
 - Pancreatic tail resection
 - Pancreatico jejunostomy
 - Whipple's procedure
- 66) Thyroid carcinoma with pulsatile vascular skeletal metastasis is seen in-
- Papillary
 - Follicular
 - Medullary
 - Anaplastic
- 67) A 49y/M suffering from carcinoma prostate was X-rayed. He showed areas of sclerosis and collapse of T10 and T11 vertebrae in X-ray. The spread of this cancer to the above vertebrae was through-
- Sacral canal
 - Lymphatic vessels
 - Internal vertebral plexus of veins
 - Superior rectal vein
- 68) Gold standard test for diagnosis of Insulinoma is-
- 72 hours fasting test
 - Plasma insulin levels
 - C-peptide levels
 - Low glucose level <30mg/dl

- 69) Peau D orange appearance of the mammary skin is due to:
- Intra-epithelial cancer
 - Sub-epidermal cancer
 - Lymphatic permeation
 - Vascular embolization
- 70) Serum calcitonin is a marker for
- Anaplastic carcinoma
 - Papillary carcinoma
 - Medullary carcinoma
 - Follicular carcinoma
- 71) A 65y old male presented with abdominal pain and distension. His stools were maroon coloured, and he gives history of cerebrovascular accident and myocardial infarction. What will be the probable diagnosis-?
- Ulcerative colitis
 - Acute mesenteric ischemia
 - Irritable bowel syndrome
 - Chron's disease
- 72) Treatment of choice for chronic ulcerative colitis is-
- Colectomy + ileostomy
 - Colectomy + manual proctectomy + ileoanal it
 - Proctocolectomy with ileoanal anastomosis
 - Ileorectal anastamosis
- 73) All the following are risk factors for carcinoma gall bladder, EXCEPT-
- Typhoid carriers
 - Adenomatous gall bladder polyps
 - Choledochal cysts
 - Oral contraceptives
- 74) Which one is not true about hyperplastic ileocaecal tuberculosis
- Mass in Rt iliac fossa
 - Common site is ileo caecal region
 - X-ray shows indrawing of caecum from ileum
 - Conservative management is treatment of choice
- 75) Most common site of opening of ectopic ureter is
- Prostatic urethra
 - Ejaculatory duct
 - Seminal vesicle
 - Vas-deference

76) Reactionary hemorrhage occurs with in

- a. 1-2 days
- b. 2-7 days
- c. <24hours
- d. After 7 days

77) A 55yr old male presents with features of obstructive jaundice. He also reports a weight loss of seven kilograms in last two months. On CT scan, the CBD is dilated till the lower end and the main pancreatic duct is also dilated. Pancreas is normal. The most likely diagnosis is-

- a. Choledocholithiasis
- b. Periapillary carcinoma
- c. Hilar cholangiocarcinoma
- d. Carcinoma gall bladder

78) Which fruit juice helps in preventing UTI:

- a. Grape
- b. Raspberry
- c. Cranberry
- d. Orange

79) Carcinoma of the right colon is most commonly of which type-

- a. Stenosing
- b. Ulcerative
- c. Tubular
- d. Fungating

80) Commonest injured organ in blast injury is

- a. Lung
- b. Liver
- c. Spleen
- d. Pancreas

81) Typhoid perforation occurs during-

- a. 1st week
- b. 2nd week
- c. 3rd week
- d. 4th week

82) A 30y old male presented with acute abdominal pain associated with blood and mucus in the stool. He also has palpable mass per abdomen on clinical examination. The most likely diagnosis for this presentation is-

- a. Meckels diverticulum
- b. Volvulus
- c. Intussusception
- d. Hypertrophic pyloric stenosis

- 83) The least common type of intussusception is-
- Multiple
 - Colocolic
 - Ileoileal
 - Ileocolic
- 84) Which of the following is the investigation of choice for assessment of depth of penetration and perirectal nodes in rectal cancer-
- Trans rectal ultrasound
 - CT Scan pelvis
 - MRI abdomen and pelvis
 - Double contrast barium enema
- 85) Triangle of Doom is bounded by all the following EXCEPT:
- Cooper's ligament
 - Vas deferens
 - Gonadal vessels
 - Peritoneal reflection
- 86) Which one of the following is treatment of choice in child with inguinal hernia?
- Bassini's repair
 - Heniotomy alone
 - Shouldice repair
 - Lichtenstein repair
- 87) Which of the following stones is hard to break by ESWL?
- Uric acid
 - Struvite
 - Calcium oxalate monohydrate
 - Calcium oxalate dehydrate
- 88) Which of the following is the most common renal vascular anomaly?
- Supernumerary renal vein
 - Supernumerary renal artery
 - Double renal artery
 - Double renal vein
- 89) In case of vesicoureteric reflex which will be the investigation of choice-
- Micturating cystourethrogram
 - IVP
 - Cystography
 - Ureteroscopy

- 90) A 60y/M chronic smoker came with history of painless haematuria for one day. The most logical investigation would be-
- Urine routine
 - Plain Xray KUB
 - USG KUB
 - Urine microscopy for malignant cytology
- 91) Commonest site of rodent ulcer is-
- Limbs
 - Face
 - Abdomen
 - Trunk
- 92) Full thickness graft can be obtained from all the following areas EXCEPT:
- Axilla
 - Groin
 - Supraclavicular area
 - Elbow
- 93) Mucinous ascitis is seen in
- Stomach Ca
 - Tuberculosis
 - Nephrotic syndrome
 - Cirrhosis
- 94) True about hydatid cyst is-
- Caused by Echinococcus granulosus
 - Cat is the definitive host
 - Blood culture is helpful
 - Surgery is the only treatment
- 95) What complication commonly occurs in anterior duodenal ulcer?
- Bleeding
 - Penetration
 - Perforation
 - Stricture formation
- 96) In treatment of papillary carcinoma thyroid, radioiodine destroys the neoplastic cells by predominantly emitting-
- α rays
 - β rays
 - γ rays
 - x rays

97) Most common type of choledochal cyst is

- a. Type 1
- b. Type 2
- c. Type 3
- d. Type 5

98) Commonest site of peptic ulcer is

- a. 1st part of duodenum
- b. 2nd part of duodenum
- c. Distal 1/3 of the stomach
- d. Pylorus of the stomach

99) Which one of the following conditions disappear spontaneously in the first year of life?

- a. Port wine stain
- b. Naevus flammeus
- c. Salmon's patch
- d. Strawberry hamangioma

100) In children most common type of polyp is

- a. Juvenile polyp
- b. Solitary polyp
- c. Familial polyp
- d. Multiple adenomatous polyp