



Tanta University
Faculty of Medicine
Department of Plastic and Reconstructive Surgery

Examination for MD Degree in Plastic Surgery

Date: 12/8/2018

Second semester: Pathology

Time allowed: 3 hours

All questions are to be answered

Total Assessment Marks: 100

Give Short Essay on:

- 1- Histopathological changes in expanded scalp skin?**
- 2- Pathology of cutaneous vascular lesions?**
- 3- Pathology and Factors affecting healing in in finger flexor tendons?**

Choose the Best Answer:

1- In a patient who has just undergone skin grafting of a recipient wound bed, which of the following is the immediate mechanism of graft survival?

- (A) Coaptation of the cut vessels in the graft to the vessels in the recipient bed
- (B) Development of a fine network of capillaries from the vascularized bed of exposed bone or tendon
- (C) Maintenance of a barrier of blood between the graft and recipient bed
- (D) Peripheral ingrowth of the capillary buds into the skin graft
- (E) Plasmatic imbibition

2- In a patient who has a halo nevus, which of the following is the primary indication for surgical excision?

- (A) Elimination of circulating antibodies
- (B) Premalignant potential

- (C) Prevention of leukoderma
- (D) Relief of pain
- (E) Resemblance to melanoma

3- Which of the following best describes the physiologic response to the immediate tissue expansion that contributes to tissue gain?

- (A) Displacement of interstitial fluid into the dermis
- (B) Immediately increased circulation
- (C) Realignment of collagen fibers
- (D) Thinning of the epidermis and microfragmentation

4- A split-thickness bone graft from the outer table of the cranium is used to reconstruct a posttraumatic saddlenose deformity. Which of the following will be the primary mechanism of bone graft healing?

- (A) Endochondral ossification
- (B) Osteoconduction
- (C) Osteogenesis
- (D) Osteoinduction

5- A 24-year-old man undergoes placement of an onlay cartilage graft to correct a posttraumatic nasal contour depression that occurred when he was struck with a baseball bat. Which of the following operative steps is most likely to result in decreased warping of the cartilage graft?

- (A) Maintenance of the vascularity of the recipient bed
- (B) Precise fixation of the graft
- (C) Preservation of the perichondrium of the graft
- (D) Use of a graft with a symmetric design

6- A 4-year-old boy has a left-sided capillary malformation of the face and upper eyelid and glaucoma in the left eye.

Which of the following is the most likely diagnosis?

- (A) Kasabach-Merritt syndrome
- (B) Klippel-Trénaunay-Weber syndrome
- (C) Maffucci's syndrome
- (D) Sturge-Weber syndrome

7- A 45-year-old woman undergoes surgical replacement of a fully inflated tissue expander with a mammary prosthesis.

The surgical scar and a portion of surrounding expanded tissue are excised.

Histopathologic examination shows no malignant cells. The most likely additional finding is thickening of which of the following tissues?

- (A) Dermis
- (B) Epidermis
- (C) Muscle
- (D) Subcutaneous tissue

8- A 3-year-old boy has a reddish blue mass on the cheek that appeared as a pale pink macule at birth and has not changed in size for a year. Which of the following is the most appropriate management?

- (A) Observation until involution is complete
- (B) Injection of a sclerosing agent
- (C) Photocoagulation with a tunable flash-pumped laser
- (D) Excision and closure
- (E) Ligation of inflow/outflow vessels

9- Healthy skin is predominately composed of which two types of collagen protein?

- (A) Type I and type III
- (B) Type I and type V
- (C) Type II and type IV
- (D) Type II and type V
- (E) Type III and type V

10- Following placement of a split-thickness skin graft, which of the following sensations returns first?

- (A) Cold
- (B) Heat
- (C) Light touch
- (D) Pain
- (E) Vibration

11- Which of the following forms of basal cell carcinoma is associated with the highest rate of recurrence after surgical excision?

- (A) Linear
- (B) Morphea
- (C) Nodular
- (D) Pigmented
- (E) Superficial

12- To maximize osteocyte survival, the most appropriate method for preserving an iliac bone graft between harvest and placement is wrapping the graft in a sponge soaked in which of the following liquids?

- (A) Antibiotic solution
- (B) Blood

- (C) Lactated Ringer's solution
- (D) Saline
- (E) Water

13- Under optimal conditions, the maximum percentage of normal skin tensile strength achieved by a healed wound is

- (A) 30%
- (B) 50%
- (C) 60%
- (D) 80%
- (E) 100%

14- A 1-year-old boy with a lymphatic malformation on the left side of the neck has a sudden increase in the size of the mass. Which of the following is the most likely cause of the enlargement?

- (A) Hemorrhage
- (B) Infection
- (C) Lymphatic obstruction
- (D) Malignant transformation
- (E) Skeletal hypertrophy

15- An 11-year-old boy with a venous malformation of the right hand is diagnosed as having chondrosarcoma when he undergoes surgical correction of a fracture of the distal phalanx of the ring finger. Which of the following is the most likely diagnosis?

- (A) Kasabach-Merritt syndrome
- (B) Klippel-Trénaunay-Weber syndrome
- (C) Maffucci syndrome
- (D) Ollier disease
- (E) Sturge-Weber syndrome

16- A 40 years old male sustained multiple lacerations while attempting to clean his lawnmower. The wound is covered with mud, rust, oil, and grass. His wife does not remember if he has ever received a tetanus shot. The most appropriate immediate treatment of this patient is

- (A) administration of tetanus immune globulin
- (B) administration of tetanus toxoid
- (C) administration of tetanus immune globulin and tetanus toxoid
- (D) intravenous administration of antibiotics, followed by delayed administration of tetanus toxoid
- (E) irrigation with antitetanus wound irrigant, followed by delayed administration of tetanus toxoid

17- An 8-year-old girl has acute suppurative arthritis involving the metacarpophalangeal joint of her index finger 48 hours after being bitten by her cat. Which of the following is the most likely causal organism?

- (A) *Aeromonas hydrophila*
- (B) *Clostridium perfringens*
- (C) *Eikenella corrodens*
- (D) *Mycobacterium marinum*

(E) *Pasteurella multocida*

18- Which of the following causes the adherence of a thin split-thickness skin graft to its recipient bed during the first 72 hours after placement of the graft?

- (A) Dermal appendages
- (B) Elastin fibers
- (C) Fibrin bonding
- (D) Inosculation
- (E) Neovascularization

19- Which of the following lesions is most commonly located on the sacrum?

- (A) Melasma
- (B) Mongolian spot
- (C) Nevus of Ito
- (D) Nevus of Ota
- (E) Solar lentigo

20- The number of times a skin graft donor site may be reharvested after healing is primarily dependent on the

- (A) blood supply to the region
- (B) density of the hair follicle/appendage
- (C) dermal thickness
- (D) epidermal thickness
- (E) Fitzpatrick skin type

21- Which of the following mechanisms of action is responsible for the initiation of epithelial cell migration across a healing wound?

- (A) Acceleration of mitosis
- (B) Contraction of myofibroblasts
- (C) Delayed mobilization of epithelial cells
- (D) Loss of contact inhibition
- (E) Normal cellular differentiation

22- A 50-year-old man has an ulcerated lesion of the hard palate. Biopsy of the lesion shows marked pleomorphic cells, frequent mitotic activity, and intercellular bridging. Which of the following is the most likely diagnosis?

- (A) Adenocarcinoma
- (B) Adenoid cystic carcinoma
- (C) Mucoepidermoid carcinoma
- (D) Necrotizing sialometaplasia
- (E) Poorly differentiated squamous cell carcinoma

33- A 45-year-old man has a 1.5-cm superficial ulcer of the midline of the lower lip. There is no lymphadenopathy on palpation of the neck. Biopsy shows well-differentiated squamous cell carcinoma. Which of the following is the most appropriate management?

- (A) Irradiation
- (B) Resection and bilateral modified neck dissection
- (C) Vaporization with a CO₂ laser

- (D) Vermilionectomy and mucosal advancement
- (E) Wedge resection

24- A 65-year-old woman has a 10-mm smooth pink nodule on the lower eyelid. Histologic analysis of a biopsy specimen confirms a diagnosis of Merkel cell carcinoma. Which of the following is the most appropriate next step in management?

- (A) Excision with direct closure
- (B) Excision with 2-mm margins and postoperative radiation therapy
- (C) Radiation therapy only
- (D) Radiation and chemotherapy
- (E) Wide excision with subtotal or total lower eyelid reconstruction

25- A 28-year-old patient with an isolated parotid tumor undergoes superficial parotidectomy. Pathology confirms a lowgrade acinic cell carcinoma with negative margins. Which of the following is the most appropriate next step in management?

- (A) Observation
- (B) Postoperative radiation therapy
- (C) Completion parotidectomy
- (D) Modified neck dissection
- (E) Radical neck dissection

Good Luck

Oral exam will be in the Plastic Surgery Department on Tuesday
28/8/2018 9 am