

Formative Semester Four 3/3/2022

Q/ Innervation of oral cavity?

Ans/

Roof is innervated by the greater palatine and nasopalatine nn from the maxillary branch of the trigeminal nerve. Floor from the lingual nerve from the mandibular branch of the trigeminal nerve, the taste fibers from the chorda tympana nerve, a branch from the facial nerve

(Session-2)

Q/ Describe briefly the mechanism of action of allergen desensitizations

Ans/

Work by altering the balance of the allergen specific T cell response towards a Th1 type of cytokine response, by inducing allergen-specific regulatory T cells that suppress the allergic response, and by inducing IgG antibodies to the antigen that have a blocking effect. IgE levels are reduced, but not usually completely eliminated. (Session-4)

Q/ Describe the barrier that identify psychological difficulty in patient.

Ans/

- Illness and treatment factors
- Health professional factors
- Patient factors

(Session-2-2)

Q/ which structure help B cell to defrenetiate to plasma cell?

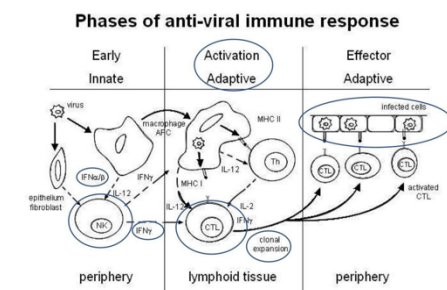
Ans/ Cytokines released by CD4 Helper T-cells

Q/ Blood supply of the tongue?

Ans/ 1-Lingual artery 2-Tonsillar branch of fascial artery 3-ascending pharyngeal artery 4- veins drain into the internal jugular vein.

Q/ Essay; draw diagram about role of gamma interferon in viral infection

Ans/ Interferon gamma activate macrophage cell in innate immunity and activate CTL in adaptive immunity



main target cells

Macrophages
NK cells
T cells
Antigen presenting cells

Principal activities

Macrophage activation
Activation
Inhibits Th2 activation
Increased MHC expression

Q/ explain the nature and classification of sexual dysfunction?

Ans/

- >Problems occur irrespective of orientation
- > more than one problem can co-exist in the same individual, problems are often present in both partners.
- > problems may be lifelong or acquired
- > problems may be generalized or situational

Q/ Enumerate the main body humeral immunity cells and their function

Ans/ B lymphocytes: that block infections and secrete antibodies to eliminate extracellular microbes

Q/ Abbreviate role of surfactant in the lung

Ans/ - Increases lung compliance by decreasing surface tension

- Stabilises the lungs, by preventing small alveoli collapsing into big ones
- Prevents the surface tension in alveoli creating a suction force tending to cause transudation of fluid from pulmonary capillaries

Q/ Describe the psychological theory of child development and consider the implications of these theory for practice

Ans/

Theorist Jean Piaget proposed one of the most influential theories of cognitive development. His cognitive theory seeks to describe and explain the development of thought processes and mental states.

All must pass through stages in same order

- Sensory-motor (0-2 yrs)
- Pre-operational (2-7 yrs)
- Concrete operational (7-12 yrs)
- Formal operational (12 yrs +)

Q/ Write the functions of (medulla , cortex , pelvis , ureter)

Ans/

- These main function of the (medulla) is to regulate concentration of the urine.
- The (cortex) provides a space for arterioles and venules from the renal artery and vein, as well as the glomerular capillaries, to perfuse the nephrons of the kidney. Erythropoietin hormone production.
- (Pelvis) collects the urine and passes it to the ureter for excretion.
- (Ureter) carry urine from the kidneys to the bladder.

Q/ enumerate 5 uses of ultra sound in radiological assessment of urinary system

Ans/

- 1-Can determine the presence/ absence of hydronephrosis
- 2-Determination of the nature of renal masses
- 3-Evaluation of renal stone, which can be characterized by casting an „acoustic shadow“
- 4-Allows ultrasound- guided intervention, for example nephrostomy insertion in patients with hydronephrosis and renal impairment or with infected, obstructed kidneys.
- 5-Evaluation of urinary retention and measurement of post- void residual (PVR) urine volume

Q/ Write the name of hormones which secreted by GI tract and their function?

Ans/

- Cholecystokinin, which signals the secretion of pancreatic enzymes.
- Secretin, which signals secretion of water and bicarbonate from the pancreas.
- Ghrelin, which signals when you are hungry.
- Gastric inhibitory polypeptide, which stops or decreases gastric secretion. It also causes the release of insulin in response to high blood glucose levels.
- Gastrin, which signals gastric acid secretion.

Q/ describe mediastinum compartment and structure?

Ans/ mediastinum is a division of the thoracic cavity

Superior: aorta

Middle: heart

Anterior: thymus

Posterior: descending thoracic aorta

Q/ Regarding to physiology of renal briefly describe the systemic factor that affects in GFR ?

Ans/

- 1- The sympathetic nervous system (via noradrenaline/norepinephrine), in systemic hypotension (i.e. sympathetic activity), renal blood flow is reduced (so as to allowing blood to be diverted to the brain and heart).
- 2- Angiotensin 2 potent vasoconstrictive effects at the efferent arteriole (with much weaker vasoconstrictor effects at the afferent arteriole).
- 3- Vasodilator prostaglandins (PGE 1 , PGE 2 , and prostacyclin)
- 4- Other factors:
 - *endothelins ,vasoconstrictors
 - *ANP (Atrial natriuretic peptide) and BNP (Brain natriuretic peptide) cause afferent dilatation. \wedge GFR
 - *Nitric oxide (NO) relaxes both the afferent and efferent arteriole and increases renal blood flow. = GFR

Q/ Define the mechanism of impact of stressors on health?

Ans/

- 1- physiological responses cause physical damage, especially when intense and/or prolonged.
- 2- effects on immune system can increase vulnerability to infection.
- 3- coping efforts: increase unhealthy behavior.
- 4- negative impact on mental health (e.g. anxiety, depression) affecting coping and illness behaviours.

Q/ Write names of muscles of pharynx:

Ans/

Superior-middle-inferior constrictor, Stylopharyngeus, Palatopharyngeus, Salpingopharyngeus

Q/ name 6 genera of normal microbes and 2 innate immune mechanisms present in human vagina?

Ans/low vaginal pH From lactobacilli prevents colonization by pathogens and flushing urine

Vaginal flora

Lactobacilli, Streptococci, Corynebacteria, Candida, Actinomyce, Mycoplasma hominis

Q/ Natural defences of respiratory system against infection

Ans/

- Cough and sneezing reflex
- Muco-ciliary clearance mechanisms
- Ciliated columnar epithelium
- Nasal hairs
- Respiratory mucosal immune system
- Lymphoid follicles of the pharynx and tonsils
- Alveolar macrophages
- Secretory IgA and IgG

Q/ In adaptive immunity specificity means

Ans/specificity ensures that distinct antigens elicit specific responses.

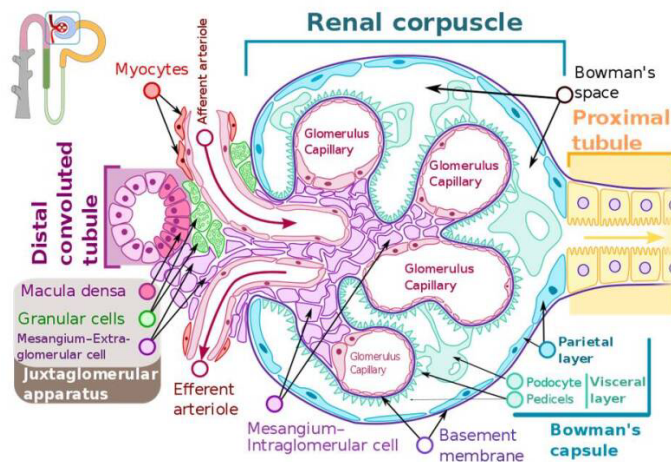
Q/ According to DSM V diagnosis, diagnosis of paraphilia is made when it persist for?

Ans/ diagnosis of paraphilia is made when it persists for six months

Q/ Clarify how ventilation cause tetany ?

Ans/ Hyperventilation cause tetany:

- 1.increase plasma pH >7.6
2. altering the albumin binding of calcium(decrease Ca^{++} solubility in blood)
3. Cause hypocalcemia
4. Nerves become hyper-excitabile



All are the structures surrounding the stomach except:

- A-liver
- B-gallbladder
- C-spleen
- D-cranium** ✓

Stomach occupies all regions of the abdominal cavity except:

- A-umbilical region
- B-epigastric region
- C-left hypochondrial region
- D-right iliac fossa** ✓

How nkc recognise self fr non-self

- A. MHC I** ✓
- B.MHCII
- C. TCR
- D. IMMUNOGLOBULIN RECEPTOR
- E.CD3

2.1)Which of the following is oxygen independent mechanism of phagocytosis?

- A)Hydrogen peroxide
- B)Hydroxyl radical
- C)Hypophalite
- D)Lactoferrin** ✓
- E)Nitric oxide

2.2)Which of the following cells helps B cells to become plasma cells?

- A)T lymphocytes** ✓
- B)Phagocytes
- C)Eosinophils
- D)None of the above
- E)All of the above

27) Regarding sympathetic NS activation in controlling BP all are true except:

- A) increasing SV via angiotensin1 receptor
- B) increasing heart rate via B1
- C) increasing vascular resistance via angiotensin2 receptor ✓
- D) activation of RAS via B1 mediated renin

28) role of kidneys in acid-base:

- A) preventing proton loss
- B) excreting bicarbonate
- C)
- D) proximal tubular cells deaminate glutamine to form bicarbonate and ammonia ✓

3.9. Which of the following inhibits gastrin secretion:

- A- histamine
- B- acetylcholine
- C- amino acid
- D- acid ✓

3.10- Ampulla of Vater is the connection between:

- A- stomach and esophagus
- B- pancreas and duodenum ✓
- C- pancreas and gallbladder
- D- pylorus and fundus of stomach

Q/ which stress hormone increase heart rate and blood pressure

- A/ cortisol
 - B/ progesterone
 - C/ adrenaline ✓
 - D/ dopamine
- Adrenaline -> short term (fight or flight). Cortisol -> long term

Q/ what two sexual dysfunction are characterized by lower sex drives and are differentiated only by whether the patient is woman or man

- A/ male hypoactive sexual desire disorder and female sexual interest/arousal disorder
- B/ delayed ejaculation and female orgasmic disorder ✓
- C/ substance/medication-induced sexual dysfunction and genito-pelvic pain/penetration disorder
- D/ female orgasmic disorder and male hypoactive sexual desire disorder

— not type of hypoxia

- A) polycythemic hypoxia ✓
- B) stagnant hypoxia
- C) hypoxemic hypoxia
- D) anemic hypoxia
- E) histotoxic hypoxia

— spirometry interpretation

- A) $TLC = IRV + IV + ERV$
- B) TV = is lung volume that represents amount of air that displaced between normal inspiration and expiration, with extra effort
- C) $RV = FRC - ERV$ ✓
- D) $IC + ERV$
- E) $IC - IRV$

—Piaget's theory focuses on children developing what?

- A) mental representation
- B) language
- C) cognitive schemas ✓
- D) theory of mind

—Why is it important for children to interact with their immediate environment?

- A) because it allows them to communicate with other ✓
- B) because it allows them to learn language
- C) because it allows them to develop new skills
- D) because it allows them to make mistakes

—Largest artery to stomach:

- A) left gastric ✓
- B) right gastric
- C) left gastroepiploic
- D) right gastroepiploic

—Which one of the following is false?

- A) CD4+ lymphocytes are also called macrophages
- B) CD4+ lymphocytes are also called T-helper cells
- C) CD4+ interacts with MHC II receptors on every cell
- D) CD4+ interacts with MHC I on every cell
- E) CD4+ interacts with MHC II on dendritic cells

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—regarding respiratory centre in brain is false?

- A) respiratory rhythmicity centre in midbrain sets basic rhythm of breathing .
- B) control respiratory muscles set rate and depth of ventilation.
- C) there are 3 pairs of nucleus.
- D) two pair of nucleus in midbrain
- E) one pair of the nucleus in the medulla oblongata.

There are 2 groups of neurons in the in medulla oblongata and one in the pons, this question is wrong

— Which of the following would be classed as a cognitive action strategy for dealing with stress?

- A) Goal setting
- B) Asking question
- C) Analyse problem
- D) All of them ✓

— According to transactional theory of stress and coping, our response to stress follows which path?

- A) Primary appraisal, Secondary appraisal, stressor, coping response
- B) Stressor, emotional appraisal, cognitive appraisal, coping response
- C) Stressor, primary appraisal, secondary appraisal, coping response ✓
- D) Emotional appraisal, cognitive appraisal, stressor, coping response

—According to renal structure which one is false

- A) kidney compose of dark brown outer cortex and light brown inner medulla
- B) medulla compose a few renal Pyramid ✓
- C) in base of pyramid extended to cortex known as medullary ray
- D) renal sinus located in the renal hilum

—All of following is decreasing LES except:

- A) Gastrin ✓
- B) Estrogen
- C) CCK
- C) glucagon
- D) Somatostatin

Autoantibody against myasthenia gravis produced against

- A) TSH receptor
- B) acetylcholine receptor ✓
- C) endomysal tissue
- D) gastric parietal cell
- E) antiglomerular basement membrane

—Septic shock caused by?

- A) Gram negative LPS ✓
- B) Gram positive LPS
- C) Gram negative peptidoglycan
- D) Gram positive peptidoglycan

C5a is protein, function :

- A) intracellular mechanism
- B) intercellular junction
- C) adhering inflammatory cells to the endothelium
- D) migration of inflammatory cells to the site of infection ✓
- E) complement system

In adaptive immunity :

- A) enable immune system to respond to a large variety of antigen ✓
- B) allow immune system to respond and to new encounter antigen
- C) non of the above

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7-GFR determined by these except

- A) Afferent-efferent arteriole
- B) Cardiac output
- C) Affinity of hemoglobin to O₂ ✓
- D) Systemic oncotic pressure

8-Regarding renal covering one of them is true

- A) Fibrous capsule located close to the outer surface of kidney ✓
- B) perirenal fat cover both kidney and suprarenal gland
- C) fascia is condensation of CT lies above pararenal fat
- D) pararenal fat composed of high amount of fat that form part of intraperitoneal fat

Q4.6(36) Viral Cause of Upper Respiratory Tract Infection ?

- a- Hemophilus influenza
- b- para influenza ✓
- c- klebsiella
- d- staphylococcus Aureus
- e- legionella

About pneumonia which one is false :

a- Severity can be assessed using (CURB65) score

b- Pneumococcal infection has very good prognosis ✓

c- Legionella Pneumonia can be test by Urine antigen

d- Oral penicillin to patients with higher risk of Lower Respiratory tract infection

e- Aspiration Pneumonia can occur in debilitated patients

37-relationship between stone formations and super solubility?

A-high solute

B-low volume

C-concentrated urine

D-all above ↑ ✓

38-which of them correct about glomerulus?

Ans/ knot of capillary ✓