Kafrelsheikh University	**Department of Biomechanics**
Faculty of Physical Therapy	**Date: - / / 2016**
Time allowed: - 1 HOUR	**DR/ Anees Saleh Ghait**

BIOMECHANICES (4)

From biomechanic point of view explain :

1- Angles within the hip joint ? (10 marks)

2- Factors affecting stability of hip joint ? (10 marks)

3- lumbar-pelvic rhythm ? (10 marks)

4- "Screw Home mechanism ? (10 marks)

5- Arches of Foot from biomechanical point of view ? (10 marks)

6-Locking and unlocking of the ankle joint? (10 marks)

Dr / ANEES SALEH SOLIMAN GHIET

B.Sc..M.Sc..Ph.D.PT.DPT

Kafr El-Sheikh University
Faculty of Medicine
Pharmacology Department

Faculty of physiotherapy
2nd Term Final Exam (26/5/2016)
Time allowed: 2 Hours

I- GIVE A SHORT ACCOUNT ON THE FOLLOWING: (54 Marks):

A- Regime, indication and contraindication of anticoagulant.

B- Side effects and precautions of cortisol.

C- Enumerate uses of calcium channel blockers.

D- Pharmacodynamics and uses of Vit. D.

E- Side effects of barbiturates.

F- Uses, side effects and contraindication of Febuxostat.

II- Compare between Aspirin & Paracetamol (6 Marks).

III- Multiple Choice Questions: (7.5 Marks)

1- Oral anticoagulant not need lab monitoring:

(Warfarin – Rivaroxaban - Argatroban).

2- Which of the following drugs never combined with nitrate in treatment of angina pectoris?

(Nifedipine - Propranolol - Aspirin).

3- The following drug used in treatment of acute tetany:

(Calcitonin – Estrogen – Parathormone Hormone).

4- The following drug inhibit dihydro-orotate dehydrogenase in course of rheumatoid arthritis treatment:

(Leflunomide – Hydroxychloroquine – Levamisole).

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5- The following drug is a potent uricosuric agent used in patient with renal impairment.

(Sulphinpyrazone – Probenecid – Benzbromarone)

IV- Mention True OR False (5 Marks)

1. Topical minoxidil used for treatment of alopecia.
2. Diclofenac could be used as NSIDs in bronchial asthma patients.
3. Cortisol is a universal Anti-inflammatory drug whatever the cause.
4. Flumazenil is used for treatment of benzodiazepine toxicity only.
5. Hydralazine could induce systemic lupus erythematosus like syndrome.

V- Give reason for the following (7.5 Marks)

1. Aspirin is contraindicated in children with fever due to viral infection.
2. Angiotensin receptors blockers is better than angiotensin converting enzyme inhibitors in treatment of hypertensive patient.
3. Platelets count should monitored during heparin therapy.
4. Diazepam should never be used by IM route in emergency.
5. Local anesthetic drugs are not effective at site of inflammation or abscess.

GOOD LUCK

Dr. Mohamed Balaha.

Kafr El-Sheikh University	**Faculty of physiotherapy**
Faculty of Medicine	**2nd Term Final Exam (26/5/2016)**
Pharmacology Department	**Time allowed: 2 Hours**

I- GIVE A SHORT ACCOUNT ON THE FOLLOWING: (54 Marks):

A- Regime, indication and contraindication of anticoagulant.

A) Regime:

- **Heparin & warfarin**:

1. **Start** by both heparin & warfarin (heparin cover latency period of warfarin).
2. **Then** stop heparin when warfarin prolong PT (after ~ 2-4 day).
3. **Warfarin** used for maintenance.
4. **Heparin** in *Emergency* for its rapid effect.
5. **Heparin** is drug of choice in Pregnancy → not pass placental barrier → safe.

- **Start from beginning by** thrombin inhibitor or factor Xa inhibitor alone.

B) Indication:

- **Prevention of thrombo-embolic disorders & extension of already formed clot.**
  1. Effective in venous than arterial thrombosis ex. cerebral, central retinal, coronary, pulmonary & DVT.
  2. Long standing atrial fibrillation (esp. with history of emboli).
  3. Coronary angioplasty & stent replacement.
  4. Disseminated intravascular coagulation (DIC).
  5. During & after surgery esp. in obese ex. pelvic & abdominal → use LMWHs.
- **During** blood transfusion, artificial kidney & cardiopulmonary bypass.
- **Heparin** in hyperlipidemia (obsolete).
- **Warfarin** as rodenticide.

⇨ CONTRAINDICATIONS OF ANTICOAGULANTS:

1. Hypersensitivity.
2. Bleeding tendency ex. hemophilia & thrombocytopenia ex. heparin & fondaparinux.
3. Head injury & intracranial hemorrhage.
4. ↑ BP.
5. Infective endocarditis.
6. GIT Ulcers.
7. Threatened abortion.
8. Pregnancy ex. warfarin.
9. Hepatic impairment ex. warfarin & argatroban.
10. Renal impairment ex. warfarin & rivaroxaban.

B- Side effects and precautions of cortisol.

➲ **SIDE EFFECTS:**

1. **Iatrogenic** Cushing's syndrome.
2. **Sudden stop after long-term use** → acute addisonian crisis.
3. **Psychosis**.
4. **Cataract & ↑ IOP** (idiosyncrasy & prolonged use).
5. **↑ BP** → ? HF.
6. **Peptic ulcer.**
7. **Hypokalemia** → worsen digitalis toxicity & hypokalemic alkalosis.
8. **Edema & weight gain** (cortisone & hydrocortisone).
9. **Teratogenicity**.
10. **Hyperglycemia** & iatrogenic DM.
11. **# Growth** in children.
12. **Myopathy & muscle weakness** esp. fluorinated steroids.
13. **Osteoporosis** → femur neck fracture & vertebral collapse.
14. **Subluxation of joints** (repeated intra-articular inj.).
15. **Moon face & buffalo hump.**
16. **Thrombo-embolic disorder.**
17. **# Immunity** → ↑ infections susceptibility.
18. **Mask infections manifestations** ex. bacterial & viral.
19. **Delayed** wounds healing.

➲ **PRECAUTIONS WITH LONG-TERM THERAPY:**

1. **Measure** → BP & weight.
2. **Investigation** → Urine glucose & X-ray spine.
3. **Diet** → rich in proteins, potassium & Ca^{+2} BUT Low in NaCl.
4. **Add** anabolics.
5. **↑ Dose** in stress.
6. **Avoid** in digitalis toxicity.
7. **Gradual** withdrawal.

C- Enumerate uses of calcium channel blockers.

1. **All types of angina:**
   - ⇨ In stable angina → ↓ cardiac work (↓ pre & after-load) & O_2-consumption.
   - ⇨ In unstable angina → ↓ cardiac work + coronary VD.
   - ⇨ In variant angina → coronary VD.
   - ⇨ ↓ Platelet aggregation → prevent change of stable to unstable angina.
   - ⇨ Preserve energy stores.

   a. In **acute attack:** SL nifedipine.

   b. In **long term prophylaxis:**

   ★ **Verapamil & diltiazem** → in angina + tachyarrhythmia.

   i. Combine with nitrate (good):

   ◆ **Verapamil:** coronary VD + arteriodilator + ↓ afterload + ↓ HR + ↑ diastolic time.

   ◆ **Nitrate**: coronary VD + venodilator + ↓ preload + ↑ HR + ↓ diastolic time.

   ii. Never combine with β blocker (bad) → # heart severely → HB & HF.

   ★ **Nifedipine:** → in angina + ↑ BP or BA.

   i. Combine nifedipine (↑ HR) with **β blocker** (↓ HR) → good.

   ii. Never combine with nitrate (bad) → sever ↓ BP & ↑ HR.

2. **Acute MI (IV infusion)** → cardio-protective.
3. **During open cardiac surgery (IV infusion)** → Preserve ischemic heart.
4. **Class-IV antiarrhythmic:** verapamil or diltiazem
   - ★ ↓ HR in supra-ventricular tachycardia ex. atrial flatter & fibrillation.
   - ★ IV Verapamil in PAT → terminate attacks (drug of choice).
5. **Hypertrophic obstructive cardiomyopathy & aortic stenosis:**
   Verapamil or diltiazem → -ve ino & chrono-trops → ↑ filling & VD → ↑ COP.
6. **Antihypertensive:** oral nifedipine in mild-moderate ↑ BP or SL in ↑ BP emergency.
7. **Cerebral insufficiency** → cinnarizine & flunarizine
8. **Prophylaxis of migraine headache** → flunarizine.
9. **cerebral vasospasm following subarachnoid haemorrhage** → nimodipine
10. **PVD** → dihydropyridine ex. cinnarizine & flunarizine
11. **BA** → Dihydropyridine ex. nifedipine.
12. **Acute & chronic renal failure** → ↑ RBF.
13. Premature labour, dysmenorrhea & toxaemia of pregnancy

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D- Pharmacodynamics and uses of Vit. D.

A) Mechanism of action: enter cell passively (lipophilic) → combine with cytoplasmic receptor forming complex → pass to nucleus → ⬆ nuclear receptor → DNA transcription → mRNA → ribosome → protein synthesis (Ca^{+2} binding protein, Ca^{+2} dependent ATPase & alkaline phosphatase).

B) Action:

1. **Intestine:** ↑ Ca^{+2} & PO_4 absorption.
2. **Kidney:** Enhance Ca reabsorption by tubules.
3. **Bone:**
   - ⬆ **Bone resorption (↑osteoclastic activity)** → maintain blood Ca^{+2} & PO_4 level.
   - **In osteomalacia & rickets** → ⬆ bone formation & maturation.
4. **Parathyroid gland** → # PTH secretion.
5. **Immunity** →⬆ immunity & antitumor activity.

➲ **USES:**

1. **Vit D deficiency** (**rickets** in children & **osteomalacia** in adults)
2. Hypocalcemia & tetany.
3. **Osteoporosis** → prevention & treatment.
4. **Renal osteodystrophy** (chronic renal failure).

E- Side effects of barbiturates.

1. **# CNS:**
   - Drowsiness & amnesia.
   - Hangover & rebound insomnia.
2. **CVS** ↓HR & ↓BP.
3. **# Respiratory system (RS)** → LD→ # RC → apnea & hypoxia.
4. **GIT disturbance** → nausea, vomiting, epigastric pain & diarrhea.
5. **HME ind.** → tolerance, cross-tolerance & dependence.
6. **Pregnancy** → addict baby.
7. **During labor** → neonatal asphyxia & postpartum hemorrhage.
8. **Blood** → megaloblastic anemia.
9. Allergy
10. **Idiosyncrasy**:
    - HME ind. → induce δ-aminolaevulinic acid (δ-ALA) synthetase → ↑ synthesis of porphyrins → ↑ its blood level → precipitate acute attack of porphyria (demyelination of the peripheral nerves, motor weakness or paralysis, hematuria, renal colic [acute abdomen] & even death).

$$\text{Proypropherin} \xrightarrow[\text{Br}+++]{\delta\text{-ALA Synthetase}} \text{Propherin} \xrightarrow[\text{Weak}]{\text{Heam Synthetase(Strong)}} \text{Heam}$$

    - Excitation esp. in females.

11. **Addiction :**
    - Long use (esp. short-acting barbiturates).
    - Sudden withdrawal → anxiety, insomnia, convulsions, coma & death (stop gradually over to 3 weeks).

12. **ACUTE TOXICITY:**
    - **Manifestations:**
      a) **# CNS** → coma
      b) **# VMC** → ↓ BP, circulatory collapse & renal failure.
      c) **# HRC** → hypothermia
      d) **# RC** → apnea & hypoxia (cause of death).
    - **Treatment:**
      a) **Endotracheal intubation** & artificial respiration.
      b) **Gastric lavage** with patient face down (avoid aspiration pneumonia).
      c) **In normal renal function** → forced alkaline diuresis (osmotic diuretic or furosemide + Na+ bicarbonate or Na+ lactate IV).
      d) **In renal failure** → hemodialysis.
      e) Analeptics.

F- Uses, side effects and contraindication of Febuxostat.

➲ **USES:** chronic hyperuricemia or gout esp. in renal impairment (no need to adjust dose).

➲ **SIDE EFFECTS:**

1. **Precipitate acute attacks of gout** with initiation treatment → add colchicine or NSAIDs.
2. **CNS** → dizziness.
3. **GIT** disturbances & abnormal liver function test.
4. **Allergy** → dermatitis & arthralgia.

➲ **CONTRAINDICATIONS:**

1. **CHF & ischemic heart disease** → fluid retention & edema.
2. **Thyroid dysfunction** → ↑ TSH level.
3. Hepatic failure.
4. Sever renal failure.
5. Allergy.

Kafr El-Sheikh University
Faculty of Medicine
Pharmacology Department

Faculty of physiotherapy
2nd Term Final Exam (26/5/2016)
Time allowed: 2 Hours

II- Compare between Aspirin & Paracetamol (6 Marks).

ACTION	ASPIRIN	PARACETAMOL
Anti-inflammatory	Strong	No
Fever of child with viral infection	Reye's syndrome	Safe
Bronchial asthma	Contraindicated	Safe
GIT	Irritation & ulceration	No effect
Uric acid	Depend on dose	No effect
Pregnancy	teratogenic	Safe
Bleeding time	Prolonged	No effect

Kafr El-Sheikh University	**Faculty of physiotherapy**
Faculty of Medicine	**2nd Term Final Exam (26/5/2016)**
Pharmacology Department	**Time allowed: 2 Hours**

III- Multiple Choice Questions: (7.5 Marks)

1- **Oral anticoagulant not need lab monitoring:**

(Warfarin – Rivaroxaban - Argatroban).

2- **Which of the following drugs never combined with nitrate in treatment of angina pectoris?**

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Kafr El-Sheikh University	**Faculty of physiotherapy**
Faculty of Medicine	**2nd Term Final Exam (26/5/2016)**
Pharmacology Department	**Time allowed: 2 Hours**

IV- Mention True OR False (5 Marks)

1. **Topical minoxidil used for treatment of alopecia. T**
2. **Diclofenac could be used as NSIDs in bronchial asthma patients. T**
3. **Cortisol is a universal Anti-inflammatory drug whatever the cause. T**
4. **Flumazenil is used for treatment of benzodiazepine toxicity only. F**
5. **Hydralazine could induce systemic lupus erythematosus like syndrome. T**

Kafr El-Sheikh University
Faculty of Medicine
Pharmacology Department

Faculty of physiotherapy
2nd Term Final Exam (26/5/2016)
Time allowed: 2 Hours

V- Give reason for the following (7.5 Marks)

1. **Aspirin is contraindicated in children with fever due to viral infection.**

   Reye's syndrom

2. **Angiotensin receptors blockers is better than angiotensin converting enzyme inhibitors in treatment of hypertensive patient.**

   No dry irritant cough and angioedema.

3. **Platelets count should monitored during heparin therapy.**

   Thrombocytopenia early and late.

4. **Diazepam should never be used by IM route in emergency.**

   Highly pound to muscle protein -> irregular absorption.

5. **Local anesthetic drugs are not effective at site of inflammation or abscess.**

   High acidity make it ionized so can't absorbed into nerve ending where it block sodi

   channel from inside nerve.

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5- The following drug is a potent uricosuric agent used in patient with renal impairment.
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GOOD LUCK

Dr. Mohamed Balaha.

Kafrelsheikh University - Faculty of Physiotherapy
Final examination in Pathology for Third year students (Second Semester)
Date: 12-6-2016
Time allowed: 2 hours
Total marks: 60

Answer the following questions (All questions to be answered):

I. Choose the correct answer: (10 marks)

1. Mumps is a viral disease affecting:

A) The nervous system B) The respiratory system
C) The skin D) None of the above

2. Russell bodies are present in:

A) Leprosy B) Actinomycosis
C) Rhinoscleroma D) Syphilis

3. The following tissues are radiosensitive EXCEPT:

A) Haemopoietic tissue B) Lymphoid tissue
C) Endothelium D) Germ cells

4. Osteomalacia is a disease resulting from deficiency of:

A) Vitamin A B) Vitamin C
C) Vitamin D D) Vitamin B3

5. The following are viral diseases EXCEPT:

A) Herpes zoster B) Smallpox
C) Toxoplasmosis D) Poliomyelitis

6. The mildest form of leprosy is:

A) Lepromatous leprosy B) Borderline leprosy
C) Tuberculoid leprosy D) Indeterminate leprosy

7. The reaction in bilharziasis occurs against:

A) Dead worms B) dead ova
C) Living worms D) Calcified ova

8. Caseous necrosis in tuberculosis is an example for:

A) Type I hypersensitivity B) Type II hypersensitivity
C) Type IIII hypersensitivity D) Type IV hypersensitivity

9. The following are cellular criteria of malignant tumours EXCEPT:

A) Anisonucleosis B) loss of polarity
C) Decreased nucleo-cytoplasmic ratio D) Abundant mitoses

10. The following are types of pathologic atrophy EXCEPT:

A) Disuse atrophy B) Inflammatory atrophy
C) Starvation atrophy D) Ischaemic atrophy

Kafrelsheikh University
Faculty of physical therapy
Date:- 14/6/2016
Time allowed:- 1 hour

D=

Type of Question	Uses	Example
Open Questions	For more information	.....(1).....
Closed Questions	..... (2)	Start with words such as: Do, Is, Will
... (3)	For added detail	What happened next?
..... (4)	To get the other back on track	You were saying that you are feeling really under pressure with the placement?
Hypothetical Questions	..... (5)	.... (6) ..... .
Direct Questions	An instruction to get attention	..... (7) ....

Answer the following questions(25 marks)

1- Why are practice educators - and others, so reluctant to provide feedback? (5 marks)

2- Enumerate the 4 - main types of Delivering the Presentation? (5 marks)

3- Posture can lead to unfair judgments and prejudices. Often, poor posture is seen as a closed body language that people assume is caused by a lack of confidence. There are, however, many different reasons why someone can have poor posture. Mention these reasons?. (5 marks)

4- Fidgeting is an outlet to release feelings or an attempt at self comfort. Besides emotions, there are a number of other reasons why people may fidget. Enumerate? (10 marks)

With my best wishes
Dr /Fayiz F. Elshamy
Dr/ Eman Abd Elfatah