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الدكتورة رغد لؤي سلمان
اسم المريض زينب شاكر العمر: ٦٠ سنة

Angina and hypertension

Rx

Nifedipine (Adalat®) 20mg m/r
tab.

1 tab B.i.d

Aspirin 100mg enteric coated tab
1tab. daily.

التاريخ / / ٢٠١٥

Q10-What are the **main indications** for nifedipine []? What is its major **site of action** (vessel or myocardium) []?

Q11- Do you recommend to maintain the patient **on one brand name of m/r nifedipine**? Why?

[]

Q12-What are the **side effect** associated with vasodilatation produced this drug

[]

Q13-The patient return to the pharmacy in the 2nd day saying that the **tablet had been passed unchanged with the stool**? (What will you tell him)?

Q14-During the treatment? The patient develops severe **fainting and drop in BP** after the ingestion of **grapefruit juice**? Rationalize and educate the patient about this effect?

Hint: see nifedipine caution and **Appendix 1 under grapefruit juice**?

(See supplement E also)

[]

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الدكتور عبد الله ناصر حسن
اسم المريض: عباس خيون لعمر: ٤٥ سنة

Angina

Rx

Amlodipine 10mg tab
1tab.daily.

التاريخ / / ٢٠١٥

Q15-What are the **differences** between Amlodipine and Nifedipine? []

Q16-3 weeks later the patient develop **ankle edema**? Rationalize and what are your **recommendations** for the physician?

(See supplement F also)

Q17-Is the use of **diltiazem** associated with lower incidence of this side effect? (See supplement F also)

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الدكتور علاء عماد ابياد
اسم المريض: سمير فرحان العمر: ٥٩ سنة

subarachnoid hemorrhage

Rx

Nimodipine (Nimotop®)

30mg tab.

60mg (i.e. 2 tablets) every 4
hours.

التاريخ / / ٢٠١٥

18-What is the **difference** between **nimodipine** and other CCBs? What is the main **indication** of it? At what **time** the treatment with it should be started after hemorrhage? And for **how long** it will continue?

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الدكتور موسى جعفر كاظم
اسم المريض: مهند كريم
العمر: ٤٧ سنة

Supraventricular arrhythmia

Rx

Verapamil 40 mg tablet
1tab. t.i.d

التاريخ / / ٢٠١٥

Q19-Why does **Verapamil** (but not nifedipine or other dihydropyridine CCBs) is used for arrhythmia? []
What are the **other indications** for it?

Q20-What is the common **GI side effect** of Verapamil?

[]

Q21-Can we use Verapamil or diltiazem safely in patient with **heart failure** or in combination with **beta-blockers**? Why?

[]

الدكتورة يقين وليد محمد حسين

اسم المريض: شاكرا ياسر العمر: ٥٣ سنة

Angina, Duodenal ulcer.

S. cholesterol=270mg/dl

Rx

Simvastatin (Zocor) 20mg tab.

1 tab. Daily

Omeprazole 20mg cap

One cap bid for one week.

Clarithromycin 500mg tab

1 tab bid for one week.

Amoxicillin 500 mg cap.

2 cap bid for one week.

Tenormin®100mg tab

1 tab daily

التاريخ / / ٢٠١٤

Q22-To which group of Lipid-regulating drugs, Simvastatin belong? Is it effective more for cholesterol or Triglyceride reduction?

[]

Q23-Knowing, that Statins can cause **myopathy**? What **counseling** should be given about this side effect?

[] See side effect: muscle effect

Q24- Knowing, that Statins can cause **hepatotoxicity**? How we can **monitor** the patient for this side effect? Hint: see caution

Q25-At what **time of the day** (morning, night...) the **single** dose of statin is usually given? Why?

(See supplement G)

Q26-Could the **grapefruit juice** taken safely by patient take Simvastatin? Why? []

Q27-What is the **problem** in this Rx:

Hint: see appendix 1 under Statins
What do you recommend :

see supplement H

or see section 1.3 the table of recommended regimen of H.pylori eradication to change the antibiotic

[]

الدكتور يوسف ضياء

اسم المريض: ستار خضير

العمر: ٦٩ سنة

Benign prostate hyperplasia (BPH)

Rx

Terazocin 2 mg tab

1 tab. daily

التاريخ / / ٢٠١٥

Q28-Why does α -blockers (like Terazocin) are **used in BPH**?

See section:7.4.1(drugs for urinary retention)

[]

Q29-At what **time of the day** (morning, or bedtime) the **first** dose of α -blockers should be given? why? And what should the patient do if symptoms such as dizziness, fatigue, or sweating occur?

Hint: see chapter 7 under

Terazocin dose :first dose effect

[]

Homework**Educate** the patient about this

Rx

(hypertension and angina)**Zocor** 20mg tab.

1 tab. Daily

Angised sublingual tab.

PRN

Isordil 10mg tab.

1 tab. T.i.d

Aspirin 100mg enteric coated tab

1 tab. daily.

Capoten 25 mg tab.

1/2 tab. X 2

Tenormin 100 mg tab.

1 x 1

الدكتور عمر حسين سرك

اسم المريض: شراد عطوان العمر: ٦٢ سنة

Angina associated with coronary vasospasm (prinzmetal's angina) also called (variant) angina

Rx

Diltiazem 120 mg m/r cap.

1 cap. B.i.d

Aspirin 100mg tab.

1 tab. Daily

Glyceryl Trinitrate (Angised ®)

0.3 mg sublingual tab.

PRN

Q30-Are the CCBs **valuable in this form of angina**? []

Q31- Do you recommend to maintain the patient on **one brand name of m/r Diltiazem**? Why?

[]

اسم المريض: سمير فرحان

العمر: ٥٩ سنة

Deep Vein Thrombosis

Rx

Heparin inj..

15000 unit S.C twice daily

Warfarin 5 mg tab

1 tablet daily

Q32-For how long we use heparin and warfarin **concomitantly**?

Why? []

Q33-What is the **laboratory test** used to **monitor heparin** therapy?

[] and what is the laboratory

test used to **monitor warfarin** therapy? []

Q34-Can we use heparins during **pregnancy**? Which type is preferred (unfractionated heparin

(UFH) or low molecular weight heparin (LMWH)) and why?

[]

Q35-Give **three examples** for LMWH . What are the advantages of LMWH over UFH?

[]

Q36-What is the **side effect** of heparin on **platelets count**? How should this effect be monitored?

[]

Supplement

A-Sublingual, buccal, or spray products are the products of choice for **acute anginal attack**. **Oral, ointment, and transdermal patches** products are acceptable for the **long-term prophylaxis of angina**.

Note : S.L tablet of GTN left out of the bottle on a table **will lose its effectiveness in just a few hours** ⁽¹⁾.

B-Tolerance can be limited by maintaining a **nitrate-free interval (NFI)** of about 10 to 12 hours daily Nitrate dosing schedule should be arranged to permit NFI during the night because angina is more likely to occur during the work day. Therefore: He should take his oral nitrate **at 7 am, noon, and 5 pm** because his exercise –induced angina is likely to occur during daylight hours. He may need to adjust his schedule if he arises earlier than 7 AM because early –morning angina is common ⁽¹⁾

Note: (Patients with nocturnal angina should arrange their NFI during the day ⁽¹⁾).

C-Nitrate induced headache is usually **transient**, typically lasting several days to few weeks . Patients should therefore be encouraged to persevere with the therapy, using simple analgesics (**Paracetamol**) when required to control any headaches ^(1, 4)

(حبوب الانجسيد تحت اللسان)
١- عند حدوث الالم في الصدر --يجب الجلوس فوراً مع وضع الحبة تحت اللسان.
٢- اذا لم يخف الالم بعد ٥ دقائق فيجب الذهاب فوراً إلى المستشفى وفي هذا الأثناء يمكن وضع حبة ثانية تحت اللسان وإذا لم يخف الالم بعد ٥ دقائق اخرى فتوضع حبة ثالثة تحت اللسان كحد أقصى .
٣- قد تشعر عند استخدامك للحبوب بشئ من الصداع أو الدوار أو الخفقان أو الطعم الحاد للحبة في الفم وهذا شئ طبيعي نتيجة عمل الدواء الموسع للشرايين.
٤- من الممكن ان يستخدم الانجسيد كوقاية وذلك باخذ حبة تحت اللسان (٥ - ١٠ دقائق) قبل القيام بأي عمل مجهود يتوقع له ان يسبب الماً في الصدر.
٥- يجب ان يحفظ الدواء في علبته الاصلية وليس خارجها. ويحفظ في مكان بارد وجاف (ولكن ليس في الثلاجة) بعيداً عن الضوء والحرارة والرطوبة. كما يجب ان تغلق العلبة باحكام بعد كل عملية استخدام.
٦- اذا كانت العلبة الاصلية تحتوي على القطن فيجب اخراجه عند فتحها اول مرة ولايعاد اليها ابداً .
٧- ترمى الحبوب ولا تستعمل ابداً بعد مضي فترة شهرين من تاريخ فتح العلبة.

D-ISMN is the active metabolite of ISDN which is responsible for most of the activity: The advantage of ISMN is: **twice daily dosing** (or **once daily with m/r** products) which mean better compliance ⁽¹⁾.

E-Adverse effects such as headaches, facial flushing, and hypotension were more common after ingestion of grapefruit juice. It is postulated that compounds in grapefruit juice **inhibit cytochrome P-450 metabolism**. This interaction could increase both the efficacy and toxicity of some CCBs and other drugs.

F-Edema (which occurs typically **2 or more weeks** after starting treatment) may response to simple measures such as elevation of feet during the night, or to a reduction in dosage, but if it persists, the CCB should be withdrawn ⁽²⁾.

Note: Edema may diminish upon conversion from a dihydropyridine CCB to a nondihydropyridine CCB such as Verapamil or diltiazem ⁽³⁾

G-Statins are usually taken in **the evening** to achieve peak serum level during the night, **when maximal cholesterol synthesis occurs**. However **atorvastatin** which has longer half life may be administered without regard to time of the day ⁽¹⁾

H-In patient requires a course of antibiotic therapy (like Clarithromycin, erythromycin,) which may interact with Statins , **The statin may be discontinued during this period and restarted when the course has been completed**⁽¹⁾

Further reading

1-Nitroglycerin should not be used within 24 hours of taking sildenafil or vardenafil or within 48 hours of taking tadalafil because of the potential for life-threatening hypotension⁽⁷⁾.

References:

- 1-Applied therapeutics. the clinical use of drugs. 2-Martindale extrapharmacopia.
 3-Calcium Channel Blocker-Related Peripheral Edema: Can It Be Resolved? Domenic A. Sica, MD J Clin Hypertens 5(4):291-294,297, 2003. 4-chronic angina .the pharmaceutical journal .2002. 5-textbook of pharmacotherapy. A pathophysiological approach. 2005
 6-Walker .clinical pharmacy and therapeutics.
 7-pharmacotherapy principle and practice . 2007 ..

List of Normal Values for the Common Clinical Biochemical and Haematological Tests

Test	Normal Value Traditional units (T.U)	Conversion .F Traditional to international units (I.U)	Normal Value(I.U)	Conversion .F I.U to T.U
Biochemistry				
S. Albumin	3. 6-5. 2 gm/dL	10	36-52 gm/L	0.1
S.ALT(GPT)	< 20 U/L	1	<20 U/L	1
S.AST(GOT)	<15 U/L	1	<15 U/L	1
S. Total Bilirubin	0.3-1.0 mg/dL	17.1	5-17 micromol/L	0.06
S. calcium(total)	8.5-10.5mg/dL	0.25	2.1-2.6 mmol/L	4
S. cholesterol	150-250mg/dL	0. 0259	3.87-6.47 mmol/L	38.7
S. creatinine	0.7-1.4 mg/dL	88.4	62-124 micromol/L	0.0113
S. glucose (fasting)	65-110 mg/dL	0. 0555	3.6-6.1 mmol/L	18
S. potassium	3.5-5.3 meq/L	1	3.5-5.3mmol/L	1
S. total protein	6.2-8.2 g/dL	10	62-82 g/L	0.1
CSF. protein	15-40 mg/dL	0.01	0.15-0.4 g/L	100
S. Sodium	136-155meq/L	1	136-155 mmol/L	1
S. triglyceride	65-180 mg/dL	0.0133	0.86-2.4 mmol/L	75.3
S. Uric acid	3-7 mg/dL	60	180-420 mmol/L	0.0166
S. urea	20-45 mg/dL	0.166	3.3-7.5 mmol/L	6
Hematology				
Hb men	12-18 g/dL	10	120-180 g/L	0.1
Hb women	11.5-16.5 g/dL	10	115-165 g/L	0.1
PCV	0.4-0.45	100	40-45 %	0.01
WBC	4000-11000/mm ³	0.001	4-11 x10 ⁹ /L	1000
Platelets	150000-400000/mm ³	0.001	150-400 x10 ⁹ /L	1000