

5AB Dysrhythmia

Interpretation and Management 2016

How to complete your biennial ECG review:

A website has been created that contains the basic review information. Use this as a reference during your review. You can also use the textbook from the ECG course as the information for the review is based on this source.

The website can be found at <http://ecgreview.weebly.com/>

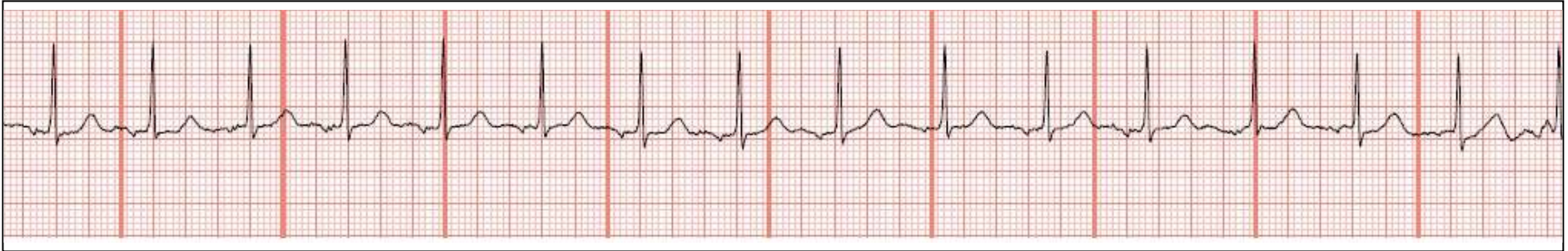
The review is 12 rhythm strips and four case studies. All sections need to be completed. All areas of the analysis (QRS, PRI, P etc) should have something written in them. If an assessment is not applicable you need to indicate this, as that way it is apparent that it was assessed.

For all rhythm analysis include:

- rate (atrial and ventricular) [use small box method as images are not to scale]
- rhythm (identify the underlying rhythm - regular; essentially regular; regularly irregular; irregular); analysis of PR interval
- QRS duration
- rhythm interpretation (what is the underlying or basic rhythm; what dysrhythmia(s) are present?).
- whether the rhythm is clinically significant and, if so, two nursing interventions you would recommend
- what you would expect the MD/NP to order for treatment

You will be given four weeks in which to complete and return the review to the educators. Please allow two weeks for marking.

Part A: analyze and interpret the following rhythm strips



1. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

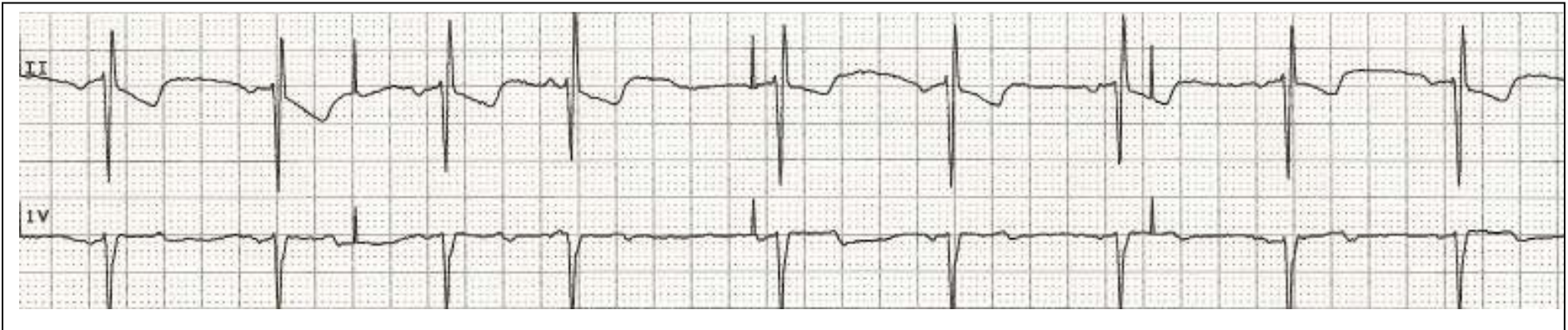


2. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

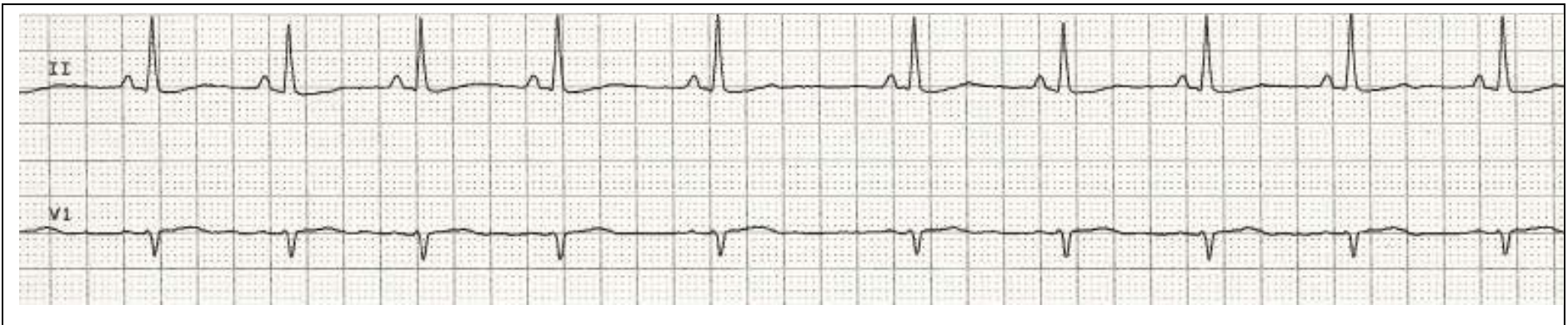
What would expect the MD/NP to order _____



3. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____
 Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____



4. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____
 Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

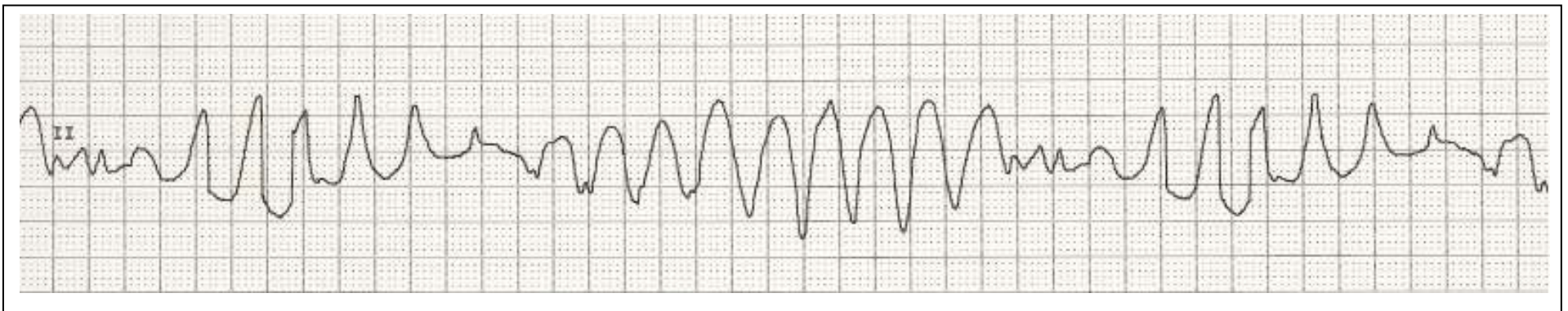


5. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

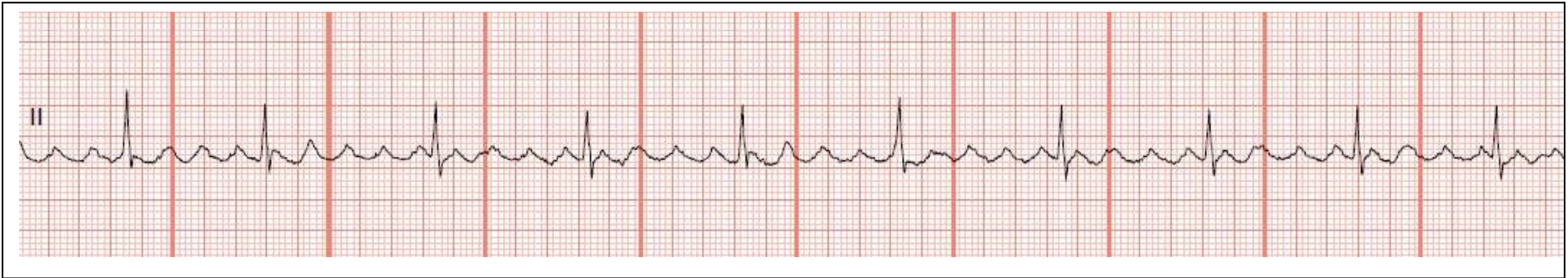


6. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

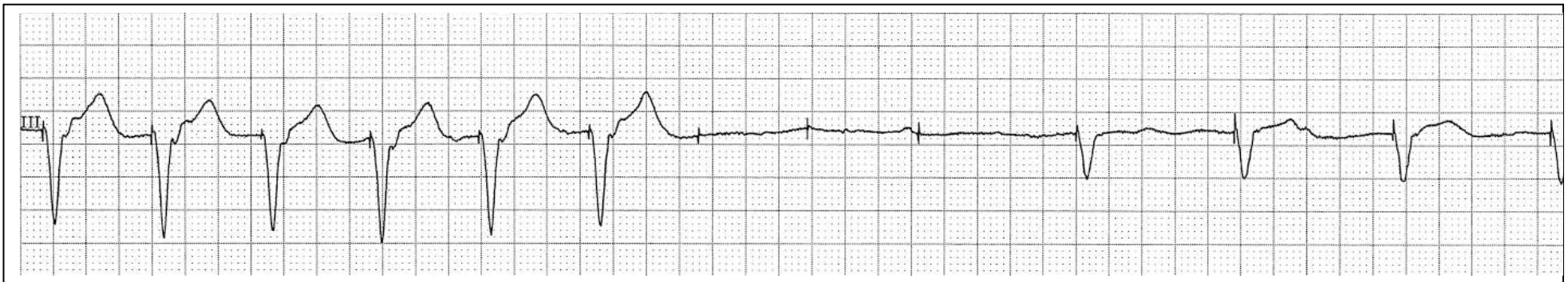


7. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

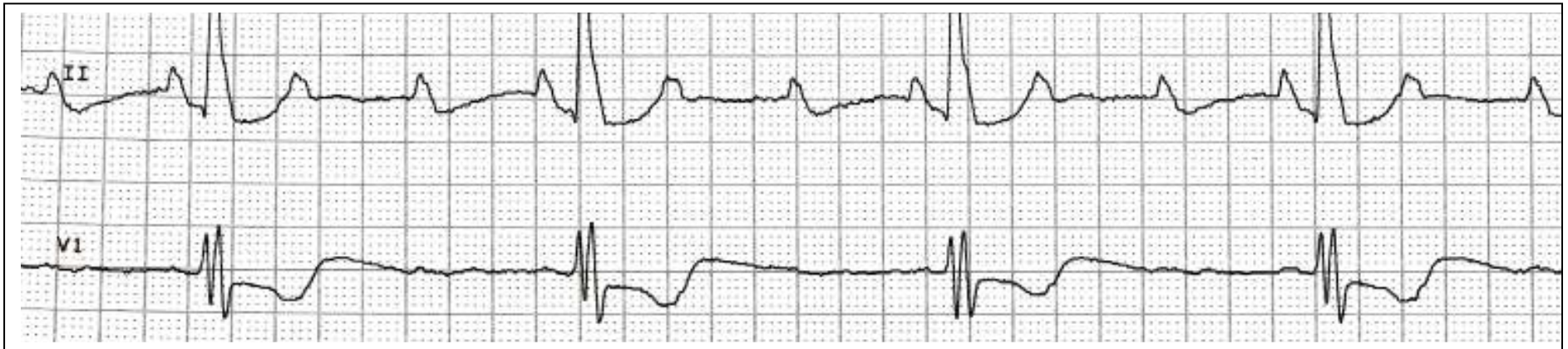


8. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____



9. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

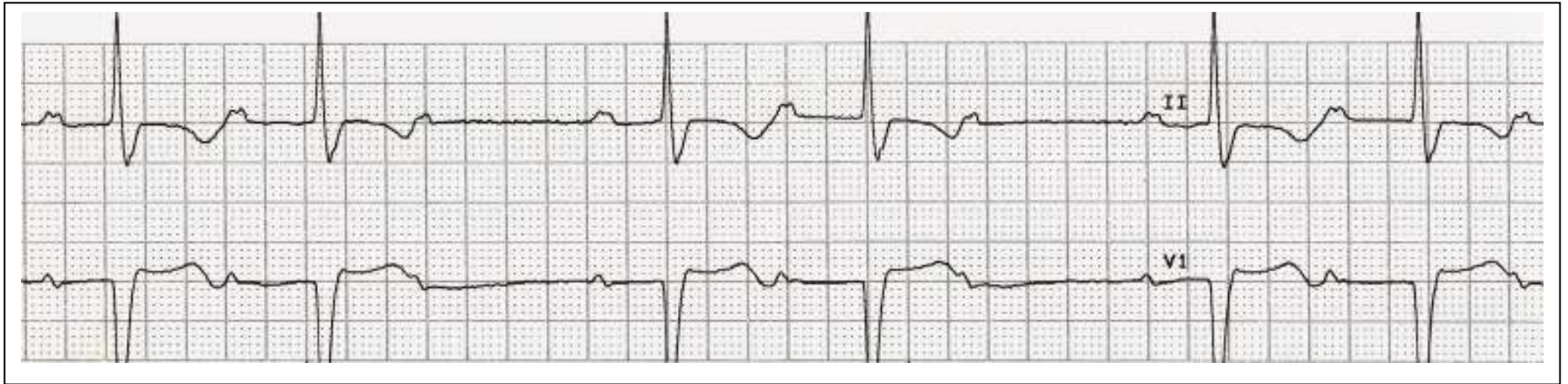


10. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

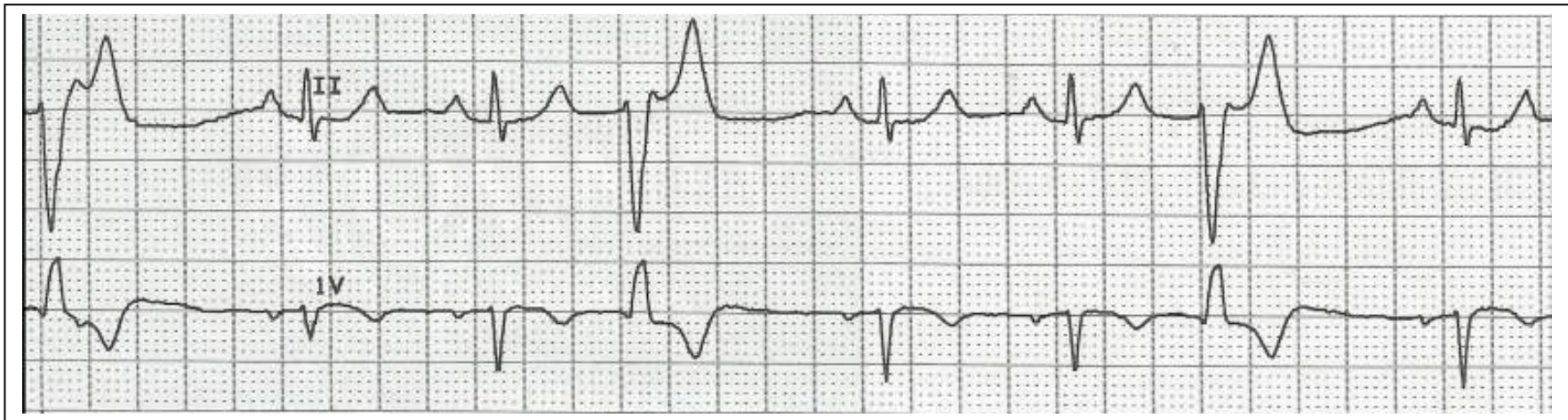


11. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____



12. Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____

Rhythm _____

List at least two **nursing** interventions if rhythm is clinically significant

What would expect the MD/NP to order _____

Part B: Case Studies

Complete the following case studies.

Case Study One:

Jane, 66 year old female, is admitted to the unit for complaints of palpitations and dizziness. On admission she has no symptom complaints. Right after shift starts she calls and tells the nurse Bob her palpitations are starting again. She is very anxious. Jane is normally healthy with no history of cardiac problems. She is active and does not smoke or consume alcohol. She states that the palpitations and dizziness started about a month ago and she experiences episodes once or twice per week.

Her physical assessment reveals:

CNS: alert, oriented x3, PERRLA, exhibits restlessness and complains of anxiety.

CVS: Heart sounds rapid S1S2 audible, good capillary refill, peripheral pulses 2+, complains of palpitations.

Resp: Lungs clear to auscultation in all lobes. Respiratory rate rapid.

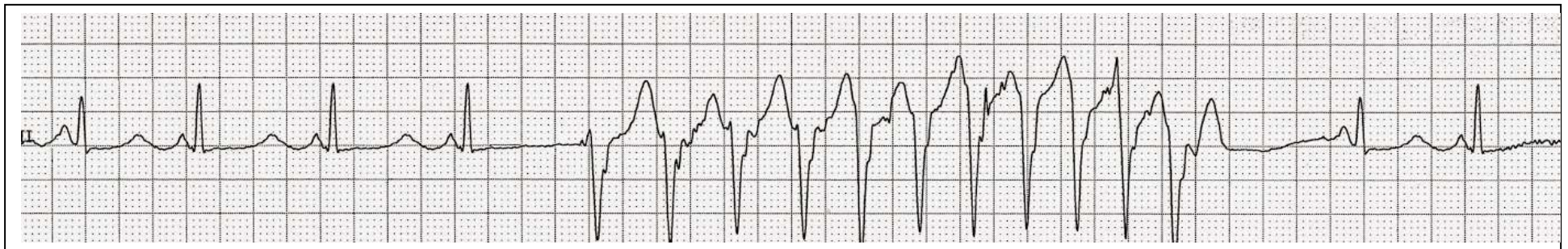
GI: BS active x 4 quadrants, abdomen soft and non-tender.

GU: Voiding clear yellow urine in adequate amounts.

Vital signs: Pulse 100, BP 100/64, Resp. rate 28, temp 36.7 O2 98% RA

Labs: Na+ 140, K+ 3.4, BUN and creatinine normal, cardiac markers all normal.

1. Jane's rhythm strip is below. Analyze and interpret the rhythm



Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____
Rhythm _____

2. What are **three** interventions Bob should consider in Jane's care?

- Administer atropine IV
- Obtain vital signs
- Notify the physician or NP
- Oxygen prn
- Administer 40 mEq potassium orally
- Call a code blue

3. The doctor starts Jane on sotalol for her arrhythmia. What potential adverse effect should Bob be monitoring for?
 - a. Bradycardia
 - b. Heart failure
 - c. Hyperkalemia
 - d. Liver function test

4. What are **three things** Bob should teach Jane about taking this medication?
 - If a dose is missed, double the next dose
 - Take the medication on an empty stomach
 - Do not take medication if pulse is less than 50 bpm
 - Change positions slowly
 - Take blood pressure one hour after taking medication
 - Do not take medication if she feels well

Case Study Two

Jim is a 77 year old man who is admitted for the management of his aortic stenosis. He undergoes a trans-catheter aortic valve implantation (TAVI) via the femoral approach and is returned to the unit.

His physical assessment reveals the following:

CNS: Alert, O X 3, moves all extremities well

Resp: Respirations 16/min, lungs clear to all lobes

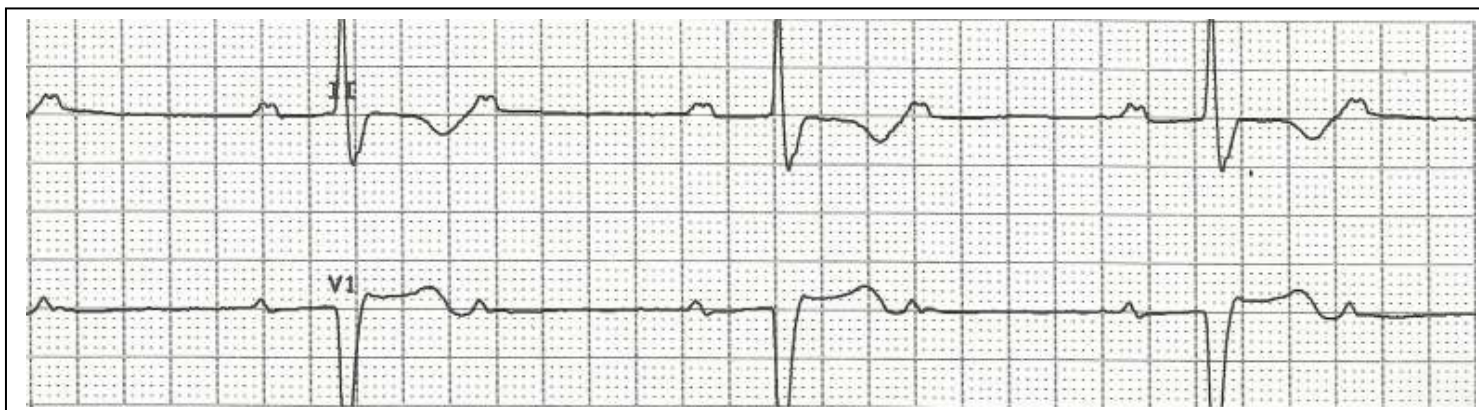
CVS: S1S2 audible with a loud murmur, good capillary refill, peripheral pulses 2+, telemetry shows bradycardia

GI: bowel sounds in all 4 quadrants

GU: No complaints,

Vitals signs: BP 103/69, HR53, R 16, T 36, O2 96% RA

1. Thirty minutes later Jim rings the call bell and complains to nurse Bob of feeling unwell (lightheaded, nauseated, sweaty). Nurse Bob assesses Jim's vital signs and finds his BP is now 79/53, HR 34 bpm, Resp 22/min, O2 93% RA. Bob prints out a telemetry strip (below). Analyze and interpret the rhythm.



Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____
 Rhythm _____

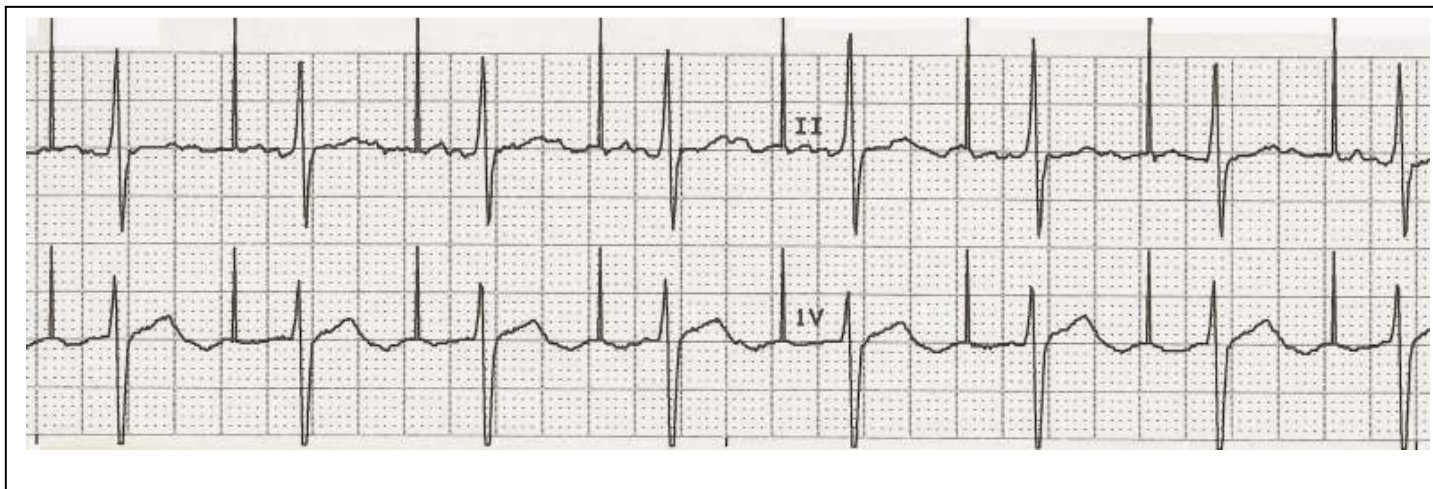
2. What are **three nursing interventions** that Bob should perform to care for Jim?
 - Notify the physician/NP of the change in status
 - Administer 50 mg dimenhydrinate IV
 - Place in trendelenburg position
 - Administer oxygen prn
 - Infuse 500 cc normal saline bolus
 - Establish IV access

3. Jim's condition does not improve and he remains symptomatic in the rhythm above. What **medical intervention** should Bob anticipate for Jim?
 - a. Cardioversion
 - b. Permanent pacemaker
 - c. Removal of the new valve
 - d. TEE

Case Study Three

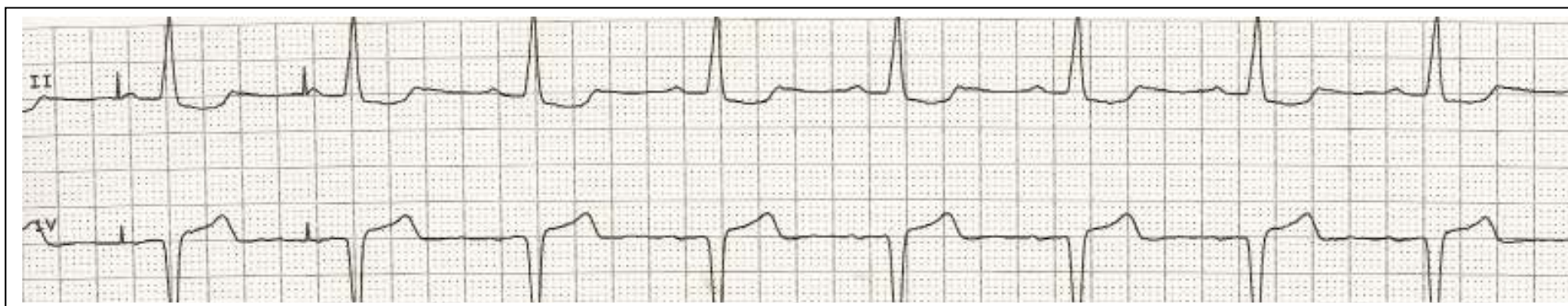
Mr. Saul, 58 years old, is admitted for the insertion of a permanent pacemaker for his arrhythmia. He has no other significant medical history.

1. Upon Jim's return from his procedure nurse Bob prints the following telemetry strip. Analyze and interpret the strip:



Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____
Rhythm _____

2. The following day Mr. Saul is feeling well and the physician writes an order to discharge him home. When nurse Bob looks at Mr. Saul's rhythm he sees the following:



Bob isn't very experienced with paced rhythms so he asks his colleagues what the rhythm is. Which response is correct?

- Atrial pacing with failure to capture
- Atrial pacing with failure to pace
- Demand ventricular pacing
- Demand atrial pacing

3. Mr. Saul is discharged home. What are **three** instructions Bob should give to Mr. Saul regarding his new pacemaker?

- Remove the dressing in one week
- Cleanse the site with antibacterial soap and water daily
- Notify the doctor if the steri-strips fall off
- Take acetaminophen for pain control
- Carry the pacemaker ID card at all times
- No big arm movements for 4-6 weeks

Case Study Four

Mrs. Wong, 73 years old, is post op day 3 after her CABG X 3. She has a history of CAD, renal insufficiency, diabetes type 2, and hypertension.

Nurse Bob's morning assessment includes the following:

CNS: alert, oriented X 3, c/o pain at 6/10 to sternal incision

CVS: S1S2 audible and regular, pitting edema to lower legs, 3 kg above her target weight.

Resp: fine crackles to bilateral lower lung fields, resps regular

GI: bowel sounds x4, BM two days ago

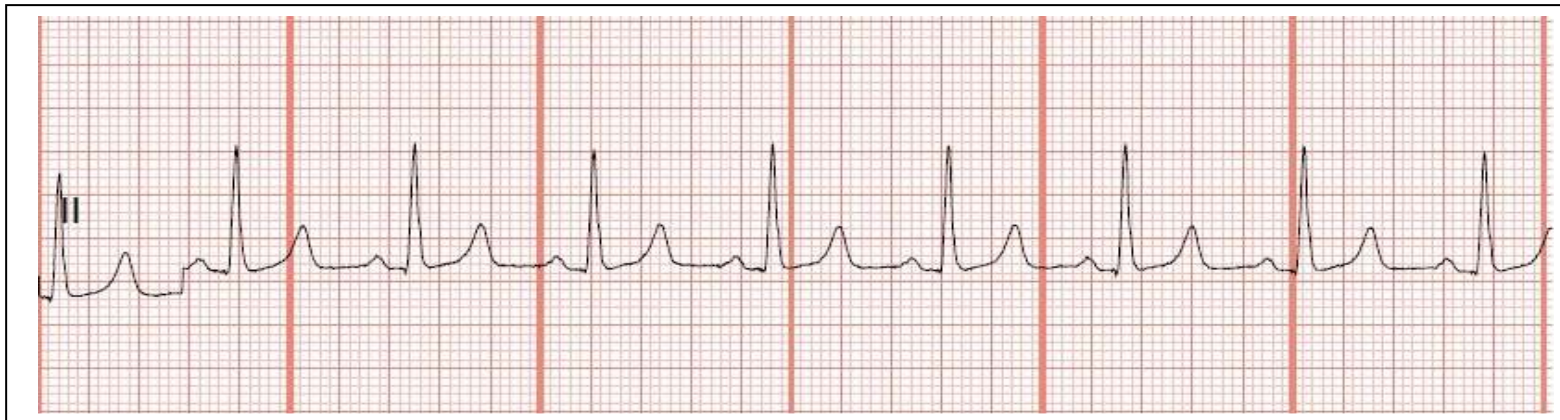
GU: voiding small amount urine (less than 30 cc every two hours)

Vital signs: BP 146/83, Pulse R 20, T 36, O2 94% RA

Blood work: Hgb 89, Creat 45, K+ 5.9, WBC 9.9, Blood sugar 10.3

Medications: metoprolol 50 mg BID, ramipril 5 mg BID, atorvastatin 80 mg daily, ASA EC 81 mg daily, furosemide 80 mg IV BID, potassium 20 mEq BID, sliding scale insulin, bowel protocol, acetaminophen 650 mg prn Q 4-6 h

1. Mrs. Wong's telemetry strip follows. Analyze and interpret the strip.



Atrial Rate _____ Vent. Rate _____ Reg _____ Irreg _____ PRI _____ QRS _____
 Rhythm _____

2. Based on Mrs. Wong's assessment data, what are nurse Bob's **three priority interventions**?

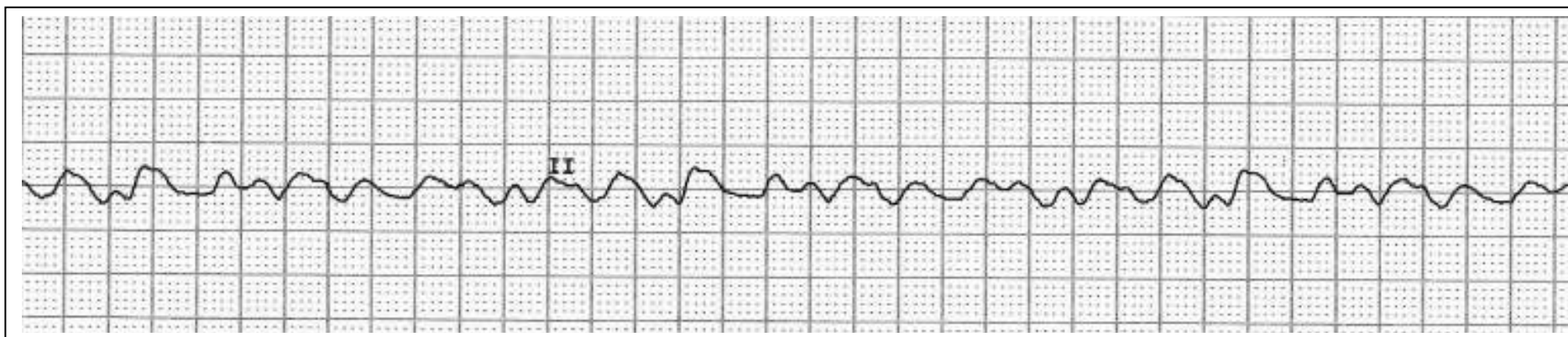
- Administer analgesic
- Hold metoprolol
- Insert foley catheter to measure output
- Administer lactulose
- Oxygen 3L via nasal cannula
- Notify MD/NP of patient status

3. What **medical intervention** should Bob anticipate for Mrs. Wong?

- Increase in furosemide dose
- Order for Kayexalate
- Metformin restarted
- Blood transfusion

4. Twenty minutes later Mrs. Wong's telemetry alarms and Bob sees the rhythm below on the screen. What is this rhythm?

- Artifact
- Polymorphic ventricular tachycardia
- Agonal rhythm
- Ventricular fibrillation



5. Mrs. Wong's rhythm is most likely caused by

- Untreated hyperkalemia
- A progression of an AV block
- Fluid volume overload
- Idiopathic

You have completed the review. Please return your review to the educators for marking. Please allow at least 2 weeks for it to be marked. Thank you

Review result:

Feedback: