

Name: _____ OASIS: _____

Summer 2014

Questions

CEPCF

Professional Development:
Hyperkalemia

1)

What is the first-line treatment for someone who is in severe hyperkalemia (not limited to paramedic scope)?

- a) sodium bicarbonate
- b) ventolin
- c) calcium gluconate
- d) Insulin and dextrose

2)

When a cell is at 'rest' and ready to fire, the following is true;

- a) sodium is concentrated mostly inside the cell
- b) potassium is concentrated mostly inside the cell
- c) sodium and potassium is concentrated inside the cell
- d) sodium and potassium is concentrated outside of the cell

3)

The average amount of potassium ingested daily is;

- a) 420 mEq
- b) 3.5 - 5.0 mEq
- c) 700 mEq
- d) 70 mEq

4)

List three signs or symptoms of hyperkalemia;

5)

A patient is hyperventilating due to emotional distress. You would expect the potassium level in the patient's blood to:

- a) increase
- b) decrease
- c) remain unaffected
- d) decrease the respiratory rate

6)

Potassium is mainly excreted through;

- a) the kidneys
- b) the GI tract
- c) respirations
- d) normal cell decay

7)

The average amount of potassium that the kidneys are capable to excrete daily is:

- a) 70 mEq
- b) 700 mEq
- c) 4,200 mEq
- d) 56 mEq

8)

List 5 factors that may cause potassium levels to increase;

9)

Ventolin is useful in the treatment of hyperkalemia because it;

- a) causes bronchodilation
- b) prevents re-uptake of potassium in the small intestine
- c) increases the rate of potassium shift into the cells
- d) stabilizes the cell membranes

10)

Which of the following ECG signs will typically occur first in hyperkalemia?

- a) tall, peaked T-waves
- b) prolonged P-R interval
- c) flattened P-waves
- d) widening of the QRS

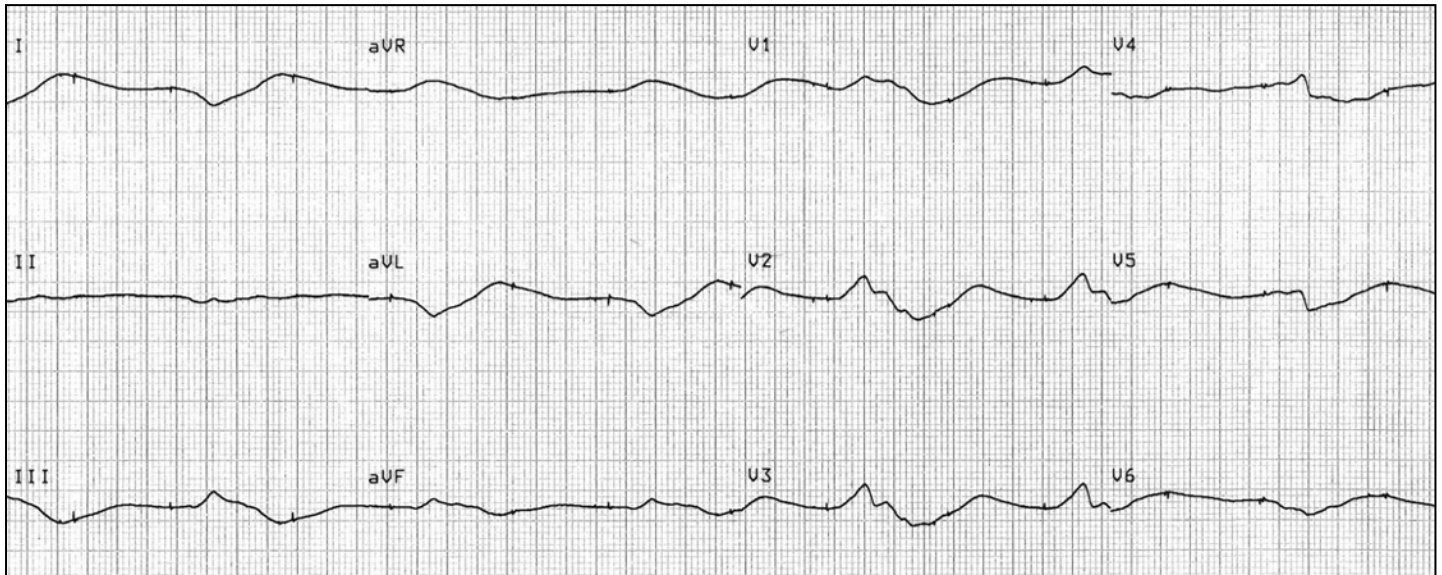
11)

At which level of hyperkalemia can you expect to start seeing a widening of the QRS?

- a) 3.5 - 5.5 mEq/L
- b) 5.6 - 6.5 mEq/L
- c) 6.5 - 8.0 mEq/L
- d) > 8 mEq/L

12)

You are attending to a 69 year old male with a history of diabetes and alcoholism. He also has some “heart problems” for which he has an implanted cardiac pacemaker/defibrillator. He is hypotensive and has profound muscle weakness. This is his 12 lead:



Based on this 12 lead you suspect his potassium level to be > ____ mEq/L

13)

Based on the above case, what is the treatment of choice (not limited to paramedic scope).

- a) sodium bicarbonate
- b) ventolin
- c) insulin/dextrose
- d) calcium gluconate

14)

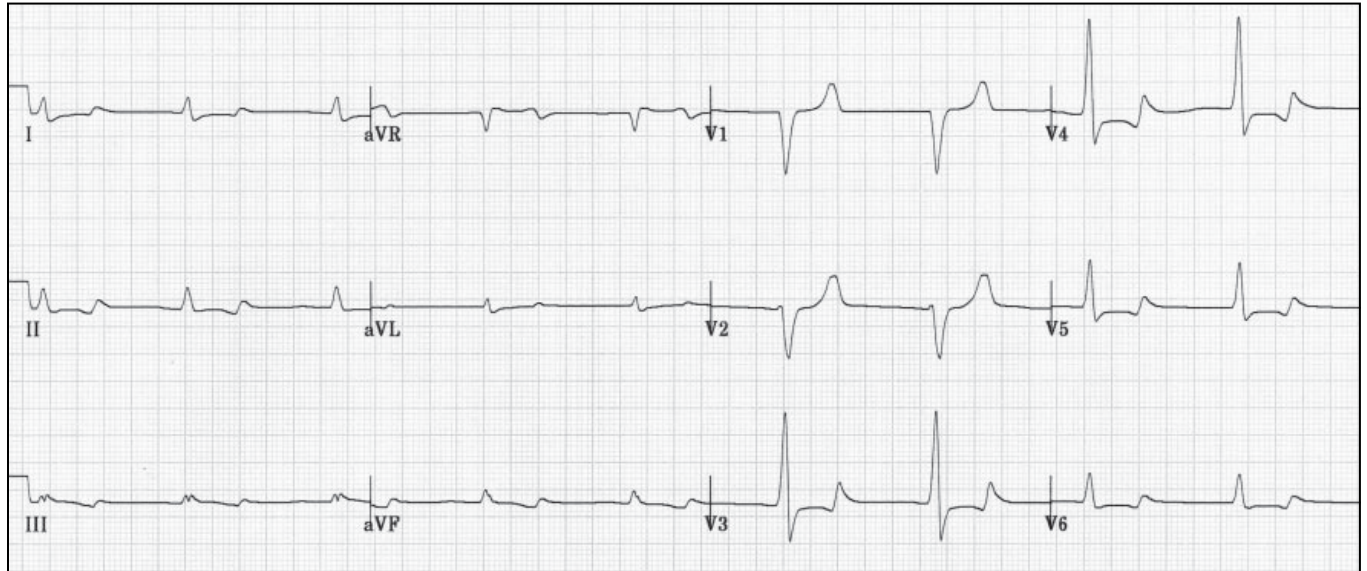
The above treatment choice works to:

- a) increase pH thus moving potassium into the cells
- b) increase the ‘speed’ of the sodium potassium pump
- c) facilitate movement of potassium intracellularly
- d) stabilize the cell membranes

15)

You are attending to a 54 year old male who called EMS because he was suddenly unable to move his limbs. You find out that he has end-stage kidney disease that is treated with dialysis.

This is his 12 lead on scene:



Your partner points out that the printout shows the QRS complex to be 0.160 s. At this point you suspect that the potassium level is _____ - _____ mEq/L

16)

En-route with the above patient, the rhythm changes. The patient is still conscious and the blood pressure is normal. You print a 12 lead ECG:



at this point you can expect that the potassium level is > _____ mEq/L

17)

If left untreated the above rhythm is likely to deteriorate into;

- a) atrial fibrillation
- b) ventricular fibrillation
- c) asystole
- d) sinus exit block

18)

List three medications that raise potassium levels:

19)

When is a dialysis patient's biggest risk at being hyperkalemic?

- a) right after dialysis
- b) right before dialysis
- c) ~ 3 hours after dialysis
- d) 24 hours after dialysis

20)

The sodium potassium pump pumps;

- a) sodium out of the cells and potassium into the cell
- b) potassium out of the cell and sodium into the cell
- c) sodium and potassium into the cell
- d) sodium and potassium out of the cell