Questions and Answers: Part 1

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Abstract

Figure 1

INTRODUCTION

This site was created in order to stress your brain for a few minutes (3 questions) while surfing by. Every once in a while we will update this section with new questions and answers. This will give you the opportunity to check your knowledge in different anesthesiologic fields. If you would like to be informed whenever we update this section please subscribe for free as reader of The Internet Journal of Anesthesiology.

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One should keep in mind that the current opinion in Europe may differ from the one in Australia or in the U.S. Having an international readership, it might be difficult to satisfy everybody with the given answers or the suggestions for additional reading. In order to assure the accuracy of this section, all the questions and especially the answers will be reviewed by several international members of the editorial board. Nevertheless, it is difficult to ensure that all the information given is entirely accurate for all circumstances. The publishers disclaim any liability, loss, or damage occurred as consequence, directly or indirectly, of the use

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QUESTION 1

What are the normal (adults) values for:

1. RV (Residual Volume)

2. IC (Inspiratory Capacity)

3. FRC (Functional Residual Capacity)

4. VC (Vital Capacity)

5. CT (Total Compliance)

QUESTION 2

You have to administer anesthesia to a patient with liver disease and ascites. You would like to use pancuronium as muscle relaxant drug. What are your considerations concerning

- initial dosage of pancuronium and,

- maintainance dosage of pancuronium

QUESTION 3

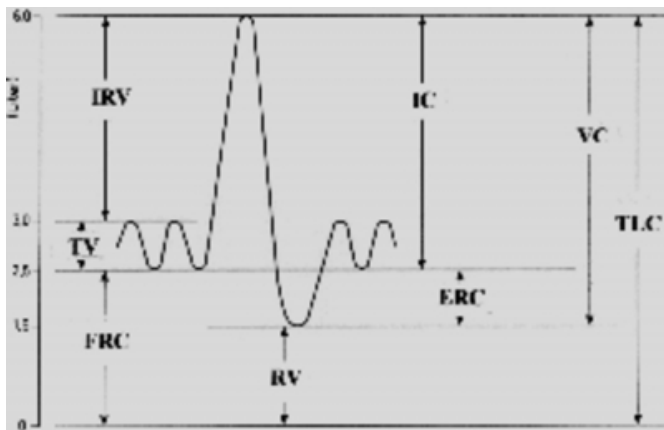What kind of cardiac arrhythmia is recorded on the ECG ?

Figure 2

ANSWERS
ANSWER TO QUESTION 1

Figure 3

1. RV = 1500 cc

2. IC = 3500 cc

3. FRC = 2500 cc

4. VC = 4500 cc

5. CT = 100 cc/mbar or 0.1 L/cm H2O

The relationship between the pressure gradient and the resultant volume increase of the lungs and thorax is known as total compliance CT. Compliance of lungs (CL) and chest wall (CCW) and their relation to CT are expressed in the equation:

$$1/CT = 1/CL + 1/CCW$$

Normally, CL and CCW each equal 0.2 L/cm H2O; thus, CT = 0.1 L/cm H2O

ANSWER TO QUESTION 2

1. You will need to administer a larger initial dose than usual because of the larger distribution volume (ascites) for the hydrophile pancuronium.

2. You will need to administer a smaller maintainance dose than usual because of the prolonged action of pancuronium in patients with liver disease.

ANSWER TO QUESTION 3

The diagnosis is:

1. A slow rate atrial flutter with variable block.

2. The slow rate is suggestive of sick sinus syndrome or drug effect (i.e., quinidine)

References

Author Information

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