

Congenital Heart Disease in Adults: Review Questions

Jeffrey M. Zaks, MD, FACP, FACC, FCCP

QUESTIONS

Choose the single best answer for each question.

- 1. Aortic stenosis in adults is commonly a result of which of the following?**
 - A) Bicuspid aortic valve disease
 - B) Left ventricular membrane
 - C) Dilated cardiomyopathy
 - D) Cystic medial necrosis
- 2. Which of the following is the most common type of congenital obstruction of the right heart?**
 - A) Tricuspid stenosis
 - B) Pulmonary valve stenosis
 - C) Atrial atresia
 - D) Inferior vena cava obstruction
- 3. Tetralogy of Fallot is composed of which of the following?**
 - A) Ventricular septal defect and right ventricular hypertrophy
 - B) Left ventricular hypertrophy, aortic stenosis, and ventricular septal defect
 - C) Ventricular septal defect, overriding aorta, right ventricular obstruction, and right ventricular hypertrophy
 - D) Left ventricular hypertrophy, right ventricular hypertrophy, atrial septal defect, and patent ductus arteriosus
- 4. Ostium primum atrial septal defects are associated with which of the following?**
 - A) Tricuspid stenosis
 - B) Pulmonary stenosis
 - C) Left axis deviation
 - D) Right axis deviation
- 5. Which of the following statements regarding atrial septal defect, secundum type is correct?**
 - A) Atrial septal defect, secundum type is a common cardiac malformation.
 - B) Atrial septal defect, secundum type is a rare cardiac malformation.
 - C) Atrial septal defect, secundum type is a component of Whipple's disease.
 - D) Atrial septal defect, secundum type is usually a cyanotic form of heart disease.
- 6. Which of the following statements regarding cor triloculare biventriculare, single atrium is correct?**
 - A) Cor triloculare biventriculare, single atrium is hemodynamically similar to atrial septal defect.
 - B) Cor triloculare biventriculare, single atrium is a common form of congenital heart disease.
 - C) Cor triloculare biventriculare, single atrium has no common symptoms.
 - D) Cor triloculare biventriculare, single atrium includes a diastolic murmur.

(turn page for answers)

Dr. Zaks is Chairman, Department of Internal Medicine, Associate Vice President, Medical Affairs, Providence Hospital and Medical Centers, Southfield, MI, and Associate Clinical Professor, School of Medicine, Wayne State University, Detroit, MI.

EXPLANATION OF ANSWERS

- 1. (A) Bicuspid aortic valve disease.** Approximately 2% of the general population has a bicuspid aortic valve defect.¹ The bicuspid aortic valve may function normally throughout life, with late stenosis resulting from fibrocalcific thickening. Aortic stenosis resulting from bicuspid valve disease occurs from increasing rigidity of the abnormal aortic valve and increasing calcification. The congenital form of bicuspid valve is conjoined anteriorly.
- 2. (B) Pulmonary valve stenosis.** Survival to adulthood is expected in most patients with pulmonary valves with systolic ejection murmurs and wide splitting of the second heart sound. The diagnosis is usually made by echocardiography. Pulmonic stenosis is one of the most common congenital heart defects, occurring in approximately 10% of the adult population.¹ Approximately 25% of patients with pulmonic stenosis also have an atrial septal defect. The most common symptom of pulmonary valve stenosis is shortness of breath with exertion; cyanosis is also common.
- 3. (C) Ventricular septal defect, overriding aorta, right ventricular obstruction, and right ventricular hypertrophy.** All of these findings are required to consider a diagnosis of tetralogy of Fallot. Physical examination of patients with tetralogy of Fallot generally reveals cyanosis, clubbing, a palpable right ventricular heave, and a systolic thrill. Electrocardiography frequently reveals right ventricular hypertrophy.
- 4. (C) Left access deviation.** Ostium primum is a defect of the atrioventricular canal with cleft mitral valve constituting approximately 25% of all atrial septal defects.¹ The tricuspid valve is either not cleft or it shows minor deficiency. Ostium primum defects are classified into type A, B, or C defects, which describe the various forms of anterior valve defects.
- 5. (A) Atrial septal defect, secundum type is a common cardiac malformation.** Atrial septal defects are found in approximately 10% of children with congenital heart disease.¹ Approximately 75% of atrial septal defects are secundum type and 20% are primum type.¹ Atrial septal defects are generally non-cyanotic, and 70% prove to be limited to the central portion of the atrial septum, whereas 20% extend to the posterior septal wall.¹
- 6. (A) Cor triloculare biventriculare, single atrium is hemodynamically similar to atrial septal defect.** Cor triloculare biventriculare is a rare form of congenital heart disease that presents similarly to a large atrial septal defect, with mild tachypnea, cyanosis, and clubbing of the fingers and toes. In patients with cor triloculare biventriculare, electrocardiography demonstrates a superior QRS axis. Echocardiography is diagnostic.

REFERENCE

1. Alexander RW, Schlant RC, eds: *Hurst's The Heart*, 8th ed. New York: McGraw-Hill, 1994.

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CARDIOLOGY

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