

## Arrhythmias in children

### Simple complement.

- The ECG changes in sinus bradycardia in children are the follows, except:
  - Sinusal p wave in all leads
  - Enlarged QRS complex
  - Normal QRS complex
  - Normal PQ interval
  - Heart rate under limit of 90 bpm in new-borns
- The arrhythmias with heterotop automatism predominance are the follows, except:
  - Paroxysmal supraventricular tachycardia
  - Sick sinus node syndrome
  - Atrial flutter
  - Atrial fibrillation
  - Atrial extrasystoles
- The ECG changes characteristic for atrial extrasystole are the follows, except:
  - Precocious P wave, different from that of basic rhythm
  - P-R interval shorter than that of basic rhythm
  - QRS complexes is supple, by supraventricular type
  - QRS complex is opposed to T waves in standard leads
  - P wave is sharp, biphasic or negative
- Atrioventricular extrasystole on ECG is characterizing by follows, except:
  - P wave is negative, premature, followed by QRS complex
  - Negative P wave included in QRS complex
  - QRS complex by normal aspect, precocious, not preceded by P wave
  - Postextrasystolic pause is not complete
  - The axis of T wave in V5-V6 leads is opposed to QRS complex axis
- The atrial flutter is defined on ECG in children by:
  - Prolonged PQ interval
  - Supple QRS complex
  - P wave following after QRS complex
  - P wave with aspect of F wave, having „saw tooth”
  - Atrial rate until 200 bpm
- The main drug in the emergency treatment of ventricular tachycardia with stable hemodynamics in children is:
  - Verapamil
  - Lidocain
  - Digoxin
  - Isoproterenol
  - Amiodarone
- A 14 years old child suddenly falled ill with palpitations, vertigo, repeated vomiting, bad general state. Pulse rate -190 bpm, subfebrility. The most probable diagnosis is:
  - Acute respiratory infection
  - Acute gastritis
  - Paroxysmal tachycardia
  - Acetonemic vomiting
  - Atrial flutter
- Investigation of a child with benign arrhythmia includes the follows, except:
  - Long time ECG
  - ECG at effort
  - Electrophysiologic intracardiac study (EIS)
  - Holter monitoring (24 hours)
  - Echocardiography
- Which sign is not characteristic for ventricular extrasystole in children?
  - Precocious QRS complex
  - Short PR interval
  - QRS complex during over 0,11-0,12 sec.
  - Absence of relationship between QRS and P wave
  - T wave axis directed contrary to QRS complex axis
- Which sign is not characteristic for supraventricular tachycardia in children?
  - Rhythmic cardiac sounds
  - Rapid atrial frequency equal to this ventricular
  - Flat P wave, notched or negative
  - Short QRS complex

E. ST segment putted out of level

### Multiple complement

1. The instrumental cardiac investigations in children with ventricular arrhythmias include:
  - A. ECG Holter monitoring
  - B. ECG with effort test
  - C. USG of kidneys
  - D. Echocardiography
  - E. Hemoleucogram
2. The symptoms which appear during ventricular tachycardia episode in children depend from:
  - A. Ventricular frequency
  - B. Access duration
  - C. Associated chromosomal aberrations
  - D. Subjacent cardiac disease
  - E. Adolescent age
3. Which signs are characteristic for benign ventricular extrasystoles in children?
  - A. Monomorphous extrasystoles
  - B. Extrasystoles in salvo
  - C. Extrasystoles number under 30 per hour
  - D. Polytopic extrasystoles
  - E. Incomplete compensatory pause
4. Which signs are characteristic for malignant ventricular extrasystoles in children?
  - A. Extrasystoles number over 30 per hour
  - B. Extrasystoles with different „bizarre” morphologies
  - C. Precocious extrasystoles
  - D. Monotopic extrasystoles
  - E. Extrasystoles in salvo
5. Which are the medicaments considered as antiarrhythmics conformable to classification:
  - A. Adenosin
  - B. Amiodarone
  - C. Lidocaine
  - D. Flecainide
  - E. Digoxin
6. For emergency treatment of supraventricular tachycardia in infant it is not recommended to perform:
  - A. Application of ice bag on face
  - B. Compression of eye globes
  - C. Administration of digoxin in associated Wolf-Parkinson-White syndrome
  - D. Administration of verapamil i.v. in association with beta adrenergic blockers
  - E. Administration of adenosin
7. Which ventricular tachyarrhythmias don't need treatment in children?
  - A. Short time ventricular tachyarrhythmia on healthy heart
  - B. Not sustained ventricular tachycardia
  - C. Sustained ventricular tachycardia
  - D. Ventricular tachycardia during 24 hours
  - E. Sustained ventricular tachycardia with Wolf-Parkinson-White syndrome
8. The characteristic ECG signs in the Mobitz I II degree atrioventricular block are:
  - A. Progressive lengthening of PQ interval
  - B. Short QRS complex
  - C. Duration of PQ interval is constant
  - D. Enlarged QRS complex
  - E. Periodic block of P wave
9. The common clinical signs of II degree atrioventricular block in children are:
  - A. Decreased cardiac debit signs
  - B. It can be asymptomatic
  - C. Syncopes
  - D. Adams-Stokes crises
  - E. Frequent palpitations
10. The emergency treatment of paroxysmic supraventricular tachycardia episode in asymptomatic child includes:
  - A. External electric shock
  - B. Application of ice bag on face
  - C. Vagal manoeuvres performing
  - D. Administration of adenosine i.v.
  - E. Administration of digoxin i.v.

## Arrhythmias

### Simple complement

1. B
2. B
3. D
4. E
5. D
6. B
7. C
8. C
9. B
10. E

### Multiple complement

1. A,B,D
2. A,B,D
3. A,C,E
4. A,B,C,E
5. B,C,D
6. B,C,D
7. A,B
8. A,B,D,E
9. A,B,C
10. B,C,D,E