Methodical guidelines for teaching emergency care skills for hypertension in PSC (using execution algorithm)

Specialty: GM
Discipline: Basics of GM practice
Course: 5,6
Department: "General practitioner - 1"
Compiled by: Abdraimova S.E.

Shymkent 2022

Department: "General practitioner - 1"	044/61
Methodical guidelines for teaching in practical skills center (using execution algorithm)	

Reviewed and discussed at the meeting of the department
Protocol No. 4 of 5. 11 2022
Head of the Department _____ Datkaeva G.M.

1.Clinical Skill Name: Algorithm for emergency care for hypertension

2.The purpose of the training: to develop the skills of laparocentesis.

3.Time required for pre-briefing and skill demonstration on a mannequin: 15 minutes

4. Time needed to master the skill: 20 minutes

5. Necessary theoretical knowledge for mastering a clinical skill:

- Causes of increased blood pressure
- Clinical symptoms of increased blood pressure
- Diagnosis and differential diagnosis of arterial hypertension
- Medical care for arterial hypertension

6. Simulator: Robot simulator ISTAN

7. List of medical products and equipment:

• Tonometer

• Phonendoscope

8. Execution algorithm:

	Steps	Algorithm of action
1	Assessment of general condition and vital signs	• assessed consciousness (excitation, stupor, unconsciousness), respiration (presence of tachypnea); position of the patient (lying, sitting, orthopnea); • color of integuments (pale, hyperemia, cyanosis) and humidity; • vessels of the neck (swelling of the veins, visible pulsation); • the presence of peripheral edema.
2	Physical examination	• pulse (correct, incorrect); • measurement of heart rate (tachycardia, bradycardia). • Measurement of blood pressure on both arms every 15-30 minutes. • Percussion: the presence of an increase in the boundaries of relative cardiac dullness to the left. • Palpation: assessment of the apex beat, its localization. • Auscultation of the heart: assessment of tones, the presence of noise, accent and splitting of the II tone above the aorta. • Auscultation of the aorta (suspicion of aortic dissection or aneurysm rupture) and renal arteries (suspicion of their stenosis). • Auscultation of the lungs: the presence of wet rales of various sizes on both sides.

		• Clarification of the presence of visual impairment, vomiting, convulsions, angina pectoris, shortness of breath; diuresis assessment. • Examination of the neurological status: decreased level of consciousness, visual field defects, dysphagia, impaired motor functions in the limbs, impaired statics and gait, urinary incontinence.
3	Chose the tactics of providing medical care	• the position of the patient - lying with a raised head end; • control of heart rate, blood pressure every 15 minutes; • gradual decrease in blood pressure by 15-25% of the original or ≤160\110 mm Hg. within 12-24 hours; • use antihypertensive drugs (start with one drug): nifedipine, captopril, propranolol, bisoprolol, metoprolol); • reduction and stabilization of the peripheral resistance of the vascular bed of the brain - vincamine 30 mg.

9. Tasks:

1. Carry out a general inspection
2. Conduct a physical examination
3. Provide medical assistance

10. Skill execution algorithm:

1. General inspection
2. Physical examination
3. Medical assistance

11.Self-assessment materials:

1. What numbers of blood pressure make it possible to state the presence of arterial hypertension:

A. >140 and >90 mmHg. Art.

B. 150 and 90 mm Hg. Art.

B. >139 and >85 mm Hg. Art.

G. >129 and >90 mm Hg. Art.

2. Name the main risk factors for arterial hypertension:

A. Hyperlipidaemia

B. Burdened heredity

B. Lack of physical activity

D. Obesity

D. Excess consumption of table salt

E. Smoking

G. Excessive alcohol consumption

H. Stressful situations of a domestic and industrial nature

I. Hard water

K. Young age

K. Mental overstrain

M. Snoring and indications of respiratory arrest during sleep (information from the patient's relatives)

3. Name the main pathogenetic links of arterial hypertension:

A. Increase in minute blood volume

B. Increase in total peripheral vascular resistance

B. Activation of the renin-angiotensin-aldosterone system

D. All of the above

4. What risk stratification factors in patients with arterial hypertension indicate a very high risk?

A. 3rd degree hypertension ≥180/110 mm Hg. Art. + ≥3 FR, POM, MS or SD

B. 3rd degree hypertension ≥180/110 mm Hg. Art. + 1–2 RF

C. 3rd degree hypertension ≥180/110 mm Hg. Art.+ AKC

D. 3rd degree hypertension ≥180/110 mm Hg. Art.

D. AH 2nd degree 160-179 / 100-109 mm Hg. Art.

E. +≥3 FR, POM, MS or SD

G. All of the above

5. Specify drugs related to β-blockers:

A. Carvedilol

B. Amlodipine

V. Losartan

G. Prazosin

D. Sotalol

6. Target organs in hypertension include:

1. Kidneys, liver, brain, retina, heart

2. Heart, retina, skeletal muscles, brain

3. Arteries, liver, kidneys, heart, retina

4. Heart, kidneys, brain, arteries, retina

5. Heart, liver, arteries, brain, kidneys

7. Hypertension stage II manifests itself:

1. An increase in plasma creatinine over 133 μmol/l

2. Daily excretion of albumin in the urine in the amount of 300-500 mg

3. Decreased glomerular filtration rate <60 ml/min/1.73 m2

4. The presence of nephroangiosclerosis according to kidney biopsy

5. Decreased accumulation of the radiopharmaceutical according to renal scintigraphy.

8. In a patient with coronary artery disease, angina pectoris occurs when walking calmly for a distance of 100 m or climbing stairs for 1 flight. What is the functional class of angina according to the classification of the Canadian Cardiovascular Society:

1. I FC

2. II FC

3. III FC

4. IV FC

5.V FC

9. The classic triad of CHF symptoms are:

1. Chest pain with deep breathing, cough and shortness of breath

2. Feeling of heaviness in the chest, shortness of breath and palpitations

3. Shortness of breath, weakness and swelling of the legs

4. Hepatomegaly, ascites and portal hypertension

5. Attacks of shortness of breath at night, coughing and palpitations

10. Sign and CHF II B stage according to Strazhesko-Vasilenko:

1. Hidden circulatory failure, manifested only during exercise

2. At rest, there are signs of circulatory failure in the small and large circle

3. With a small load, there are signs of circulatory failure in a large circle

4. At rest, there are signs of circulatory failure, either in a small or in a large circle

12. Criteria for assessing the performance of skill

	Steps	Algorithm of action	Performance evaluation	
			Yes	Not
1	Assessment of general condition and vital signs	• assessed consciousness (excitation, stupor, unconsciousness), respiration (presence of tachypnea); position of the patient (lying, sitting, orthopnea); • color of integuments (pale, hyperemia, cyanosis) and humidity; • vessels of the neck (swelling of the veins, visible pulsation); • the presence of peripheral edema.		
2	Physical examination	• pulse (correct, incorrect); • measurement of heart rate (tachycardia, bradycardia). • Measurement of blood pressure on both arms every 15-30 minutes. • Percussion: the presence of an increase in the boundaries of relative cardiac dullness to the left. • Palpation: assessment of the apex beat, its localization. • Auscultation of the heart: assessment of tones, the presence of noise, accent and splitting of the II tone above the aorta. • Auscultation of the aorta (suspicion of aortic dissection or aneurysm rupture) and renal arteries (suspicion of their stenosis). • Auscultation of the lungs: the presence of wet rales of various sizes on both sides. • Clarification of the presence of visual impairment, vomiting, convulsions, angina pectoris, shortness of breath; diuresis assessment. • Examination of the neurological status: decreased level of consciousness, visual field defects, dysphagia, impaired motor functions in the limbs, impaired statics and gait, urinary incontinence.		
3	Chose the tactics of providing medical care	• the position of the patient - lying with a raised head end; • control of heart rate, blood pressure every 15 minutes;		

		• gradual decrease in blood pressure by 15-25% of the original or ≤160\110 mm Hg. within 12-24 hours; • use antihypertensive drugs (start with one drug): nifedipine, captopril, propranolol, bisoprolol, metoprolol); • reduction and stabilization of the peripheral resistance of the vascular bed of the brain - vincamine 30 mg.		

13. Literature

1. Sultanov VK, Study of the objective status of the patient. - St. Petersburg: Peter Press, 1996.

2. Academic medical history: rules for examining a patient and registration in clinical descriptions - Ufa, 2012.

14. Correct answer templates for assessment material

1. A;
2.A, B, C, D;
3. G;
4. A, B, C;
5.A,D,E;
6.4;
7.3;
8.3;
9.3;
10.2