


ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
DEPARTMENT OF «Introduction to the clinic» Practical training in clinical skills	044-75-

**Methodological manual for the teacher on teaching clinical skills at the Center for practical skills
(using the algorithm of execution)**


Rules and techniques of intravenous injections to patients.

Specialty: GM

Course: 2

Department: "Introduction to the clinic"

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Reviewed and discussed at the meeting of the department
 Protocol No. 5 25.11.2022

Head of the Department



Zhumadilova A.R.

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1.Name of the clinical skill: Intravenous infusion

2.The purpose of training: Mastering the skills of intravenous administration using the necessary substances.

3.Time required for preliminary instruction and demonstration of the skill on a dummy: 5 minutes.

4.Time required to master the skill on your own: 10 minutes

5. Learning objectives: Mastering Intravenous Injections with appropriate use

Theoretical knowledge necessary for mastering clinical skills:

1 Ability to correctly find the topographical location of the blue vein.

2 Ability to communicate with patients.

3 Proficiency in general deontological theories.


4 Mastery of sterilization measures.

6.Trainer: Manual simulator for intravenous injections and punctures

7.List of medical products and equipment: in the pantry: medicines, solutions, system, screw, cotton balls, 70% ethyl alcohol, roller, cutter

8. Execution algorithm:

№	Step-by-step actions	Estimates are fulfilled	
		yes	no
1.	Introduce yourself		
2.	Explain the procedure of manipulation to the patient and obtain his consent All the necessary items (a spoon, medicine, syringe, system, sodium chloride 09% solutions, cotton balls, 70% ethyl alcohol, a knife, a cutter), a tripod, a tourniquet.		
3	Wash your hands and wear a towel		
4.	Read the name, amount, period of use of the medicine		
5.	Treat the neck of the ampoule with an alcohol-soaked swab, then add it to the opening solution.		
6.	Pump out the necessary amount of medicine, add it to a special solution, connect the system hose and monitor the air release, cover the needle of the finished solution with a cap and put it on the stand.		
7.	Sit or lay the patient on a couch		
8.	Determination of the area to be vaccinated		
9.	Treatment of a large area to be grafted with cotton balls dipped in alcohol		
10.	Treatment of a large area to be grafted with cotton balls dipped in alcohol		
11.	Then treat the area to be grafted		
12.	Throwing balls into the scrap bin		
13.	With the left hand, it is necessary to monitor the site of grafting or the movement of the root.		
14.	Taking the syringe in the right hand, with the tip of the needle facing up, insert it into the base of the skin at an angle of 25°, to a depth of 1-2 cm.		

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15.	With the first and second fingers of the left hand, determine if the cyst has entered the vein by pressing the cuff, then open the screw and release the medicine.		
16.	After inserting, press the injection site with a cotton swab dipped in alcohol, quickly remove the needle and complete the procedure.		
17.	Discard the syringe and ball into the waste container		
18.	Monitoring the patient's condition		
19.	Take off your clothes and wash your hands		

Evaluation criterion

Time allotted for the task - 5 minutes

Maximum score: (100%)

Score: (%)

Full name and signature of the teacher who evaluated the criterion:

Test

1. For intravenous administration, it is possible to use drugs:

- a) glucose solution 5%;
- b) sodium chloride solution 0.9%
- c) sodium chloride solution 10%;
- d) camphor oil;
- e) synthomycin liniment

2. What is the role of the air tube in an intravenous drip system?

- a) displaces the liquid from the vial with the solution;
- b) contributes to the droplet movement of liquid through the system;
- c) prevents the penetration of air into the tubes of the system;
- d) contributes to the uniform flow of liquid from the vial;
- d) everything is correct

3. What complications are associated with violation of the rules of asepsis and antisepsis during injections?


- a) air embolism;
- b) fat embolism;
- c) allergic reactions;
- d) hepatitis B disease;
- e) development of post-injection abscesses and infiltrates

4. To perform venesection, the following instruments are required, except:

- a) retractor;
- b) Gegar's needle holder;
- c) scalpel;
- d) four-pronged hooks;
- e) curettes of different sizes

5. Venesection is:

- a) vein puncture followed by catheter insertion;
- b) opening of the lumen of the vein;

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- c) a surgical method for the treatment of varicose veins;
 - d) all answers are correct;
 - d) there is no correct answer
6. Preparation C-4 is a mixture of:
- a) hydrogen peroxide and ethyl alcohol;
 - b) hydrogen peroxide and chloramine solution;
 - c) hydrogen peroxide and formic acid solution;
 - d) hydrogen peroxide and oxalic acid;
 - e) hydrogen peroxide and glacial acetic acid
7. What are the indications for the use of intravenous infusions?
- a) decrease in the volume of circulating blood;
 - b) intoxication of the body;
 - c) increased blood pressure;
 - d) violation of water and electrolyte balance;
 - e) pulmonary edema
8. Best ways to sterilize syringes and needles:
- a) dry heat
 - b) autoclaving;
 - c) gas sterilization;
 - d) cold sterilization;
 - e) boiling
9. What complication can develop in case of penetrating vein perforation during venipuncture?
- a) fat embolism;
 - b) infiltrate;
 - c) pyrogenic reaction;
 - d) air embolism;
 - e) all of the above is correct
10. What complication can develop if 10% calcium chloride solution enters the subcutaneous tissue?
- a) necrosis;
 - b) fat embolism;
 - c) pyrogenic reaction;
 - d) air embolism;
 - e) anaphylactic shock

9. Criteria for evaluating the performance of the skill.

Completed : The student completed a 10-step clinical skill. forces the whole skill from greeting to performing the intravenous injection skill using the necessary substances. There was contact with the patient. When the condition improved, they were sent for further examination and treatment, and otherwise, that is, when the condition worsened, an ambulance was called.

Completed by half: the student completed a clinical skill out of 10 6. He said hello, but did not complete the entire manipulation. There was no feedback from the patient. Said goodbye.

Failed: The student failed to complete the 10-step clinical skill. I didn't perform the whole manipulation. There was no feedback from the patient. Didn't say goodbye.

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10. Literature:

Main references

- 1) A list of templates (samples) of SOPs for PHC (rules, instructions, procedures, algorithms) of the Accreditation Center (as of 06.06.2013) with additions by participants of the workshop on 27.05.2013.
- 2) Methodological recommendations "Standardization of clinical and non-clinical production processes in medical organizations, their implementation and monitoring", RSE at PCV "RCRZ" of the Ministry of Health of the Republic of Kazakhstan, 2017
- 3) American Heart Association. (2017). Monitoring your blood pressure at home. Verified on November 29, 2018 on the website <https://www.heart.org/en/health-topics/highblood-pressure/understanding-blood-pressure-readings/monitoring-your-bloodpressure-at-home>.

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