

O.O. Bogomolets National Medical University

Pediatric station

OSCE - 2

"Initial care and resuscitation of a newborn child"

Kyiv-2019

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PASSPORT OF OSCE-2 STATION

The name of the station "Initial care and resuscitation of a newborn child"

Working group: Academician of the NAMS of Ukraine Maidannik V.G., Corresponding Member of the NAMS of Ukraine Volosovets O.P., prof. Kryvopustov S.P., prof. Lukashuk V.D., Dr. Sci. Berezenko V.S., prof. Pochinok T.V., Docent Loginova I.O., Docent Shevtsova T.I., Docent Lutai T.I., Assoc. Pfor. Burlaka Ie.A.

Authors: Docent Loginova I.O., Docent Shevtsova T.I.

Station type - OSCE 2 practical skills.

Objective. A 6th year student conducts an initial assessment of the newborn child condition in the delivery room immediately after the birth (active, inactive), initial steps of care (provision of heat, provision of the right head and neck position, respiratory rehabilitation, drying, stimulation), artificial lung ventilation, indirect heart massage, medicines introduction (adrenaline, physiological solution) in accordance with the unified clinical protocol "Initial, resuscitation and post-reanimation care for the newborn in Ukraine" during 10 minutes.

Conditions for the OSCE station proceeding

The patient – training manikin of a newborn child.

Consumables - disposable diapers, clothes (hat, socks), medical gloves, ligature, adrenaline solution, physiological solution, antiseptic solution.

Equipment - room equipped as a delivery room, resuscitation table, radiant heat lamp, roller, rubber syringe, stethoscope, device for lung ventilation under positive pressure, mask for newborns, laryngoscope, endotracheal tubes 2,5; 3.0; 3.5 mm, kit for umbilical cord vein catheterization, pulse oximeter.

Instruction for the student

Provide initial care and resuscitation assistance to a newborn child according to the current situation.

Runtime - 10 min.

Instruction for teacher/observer

- Identify the student
- Register student
- Provide an instructions to student
- Rate (fill in the check klist)
- Intervene only in case of unforeseen situations

Algorithm

1. Appearance (clean clogged white coat, gathered hair, short nails, appropriate shoes).
2. Washing hands with antiseptic, putting on medical gloves.
3. Assessment the child's condition.
4. Sounding actions according to the child's condition.
5. Provide the right position to achild.
6. Carrying out of the sanitation of the respiratory tract.
7. Drying and stimulating the baby.
8. Conducting the lung ventilation under positive pressure.
9. Intubation of the trachea.
10. Carrying out an indirect heart massage.
11. Drung administratation throught the umbilical vein.

SCENARIO of the OSCE-2 station
"Initial care and resuscitation of a newborn child"

1. Before the child birth you need to know the answer to 4 questions:

- What is the gestational age of a child?
- Are amniotic fluid clean?
- How many babies are expected to be born?
- Are there any risk factors?

Obstetric history: The gestation period is 39 weeks, amniotic fluid is clean, one child, the umbilical cord lobes drop, caesarean section.

2. After the birth of a child quickly evaluate his/her condition:

Does hi/she look mature?

Does he/she breathe?

Does he/she have a satisfactory muscle tone?

Situation at the moment of birth: child is mature, muscle atony, there is no cry.

3. Start the initial care steps (30 seconds):

- provide the heat
- provide the right position to the head
- conduct respiratory sanitary
- drying
- tactile stimulation.

Condition of a child after the initial steps: a child does not breathe, heart rate – 70/min, skin is cyanotic.

4. The next step is lung ventilation under the positive pressure (30 seconds).

Condition of a child in 30 seconds of lung ventilation under the positive pressure: a child does not breathe, heart rate – 50/min, oxygen saturation - 50%.

5. The following effect: tracheal intubation and indirect heart massage (60 seconds).

Child's condition in 60 sec since the lung ventilation and conduction of indirect cardiac massage: a child does not breathe by itself, heart rate – 50/min, skin cyanotic, oxygen saturation - 65%.

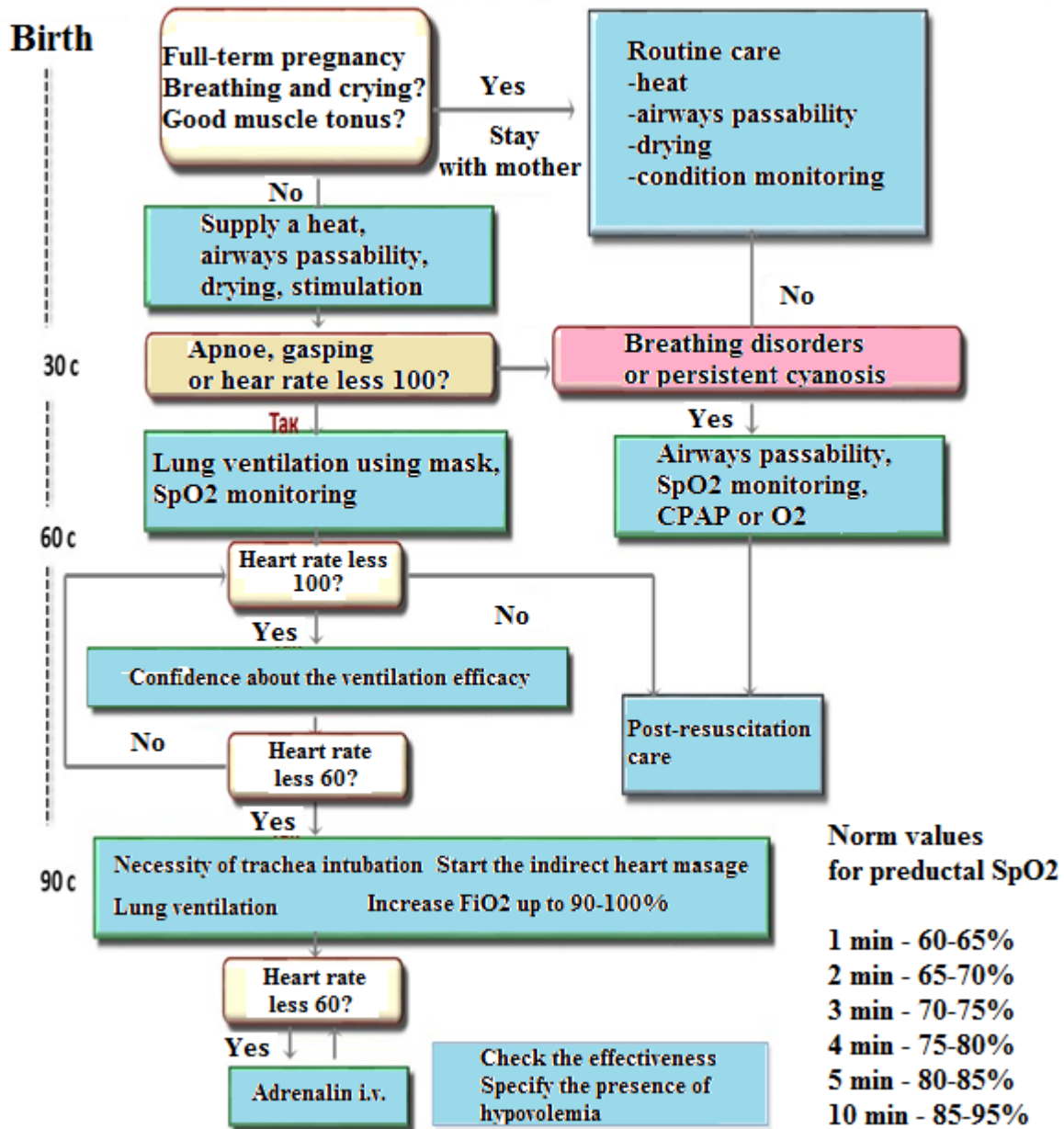
6. Next action: umbilical vein catheterization, administration of adrenaline solution.

In 30 seconds - the heart rate is 100/min, oxygen saturation is 90%.

7. Next action: Continue lung ventilation through the intubation tube. Transport a child to the intensive care unit for post-resuscitation care.

Algorithm of the OSCE-2 station

"Initial care and resuscitation of a newborn child"



Instructions for student at the OSCE-2 station
"Initial care and resuscitation of a newborn child"

1. A child was born from the first pregnancy in the gestation period of 39 weeks, amniotic fluid is clean, cavernous loops fallout, caesarean section. At birth, there is no respiration, muscular atony. Required measures?

2. Condition of a child after the initial care giving: a child does not breathe, heart rate – 70/min. Required measures?

3. Condition of a child after the initial resuscitation measures: the child does not breathe, heart rate – 50/min, oxygen saturation - 50%. Required measures?

4. Condition of a child after the cardiopulmonary resuscitation: a child does not breathe by himself, heart rate – 50/min, oxygen saturation - 65%. Required measures?

5. Condition of a child after the medicines administration: heart rate – 100/min, oxygen saturation - 90%.

Instructions for examiner at OSCE-2 Station
"Initial care and resuscitation of a newborn child»

Clinical situation: a child born from the first pregnancy, gestation period 39 weeks, amniotic fluid is clean, the umbilical cord loops fallout, the caesarean section. At birth there is no respiration, muscular atony. Required Actions?

1. Student washes hands and wears gloves.
2. Evaluates the condition of a child at birth (mature, inactive).
3. Puts a child wrapped in nappy on a back on table with a radiant heat.
4. Provides a correct position (put a roll under the shoulder).
5. Carries out the respiratory tract sanitation (using a rubber syringe sucks the contents of the oral cavity first, then the nose cavity for 5 seconds).
6. Drying the child.
7. Takes a wet diaper away.
8. Conducts tactile stimulation (by rubbing the back and extremities).
9. Provides a correct position again.
10. Evaluates breathing (absent).
11. Evaluates heart rate (70/min).
12. Attaches a mask to the device for the lung ventilation under the positive pressure.
13. Attaches a mask to the child's face (should cover the chin, mouth and nose).
14. Conducts the ventilation with air at a frequency of 40-60/min (breath-one-two), observing the chest movements.
15. Evaluates the respiration in 30 sec (absent).
16. Evaluates the heart rate (50/minute).
17. Attaches a pulse oximeter to the child's right wrist (50% saturation).
18. Inserts the tube into the trachea using a laryngoscope.
19. Connects the intubation tube to Ambu Bag.
20. Conducts the cardio-pulmonary resuscitation: indirect heart massage by pressing on the lower third of the sternum (under the nipple line) with thumbs, other fingers - under the child's back, and ventilation with 100% oxygen with ratio of 3:1 for every 2 seconds (and one, and two, and three, and breath).
21. Evaluates breathing in 60 sec after the cardio-pulmonary resuscitation (absent).
22. Evaluates the heart rate (50 per minute).
23. Evaluates saturation (65%).
24. Changes gloves to sterile.
25. Cleaning of the umbilical cord with antiseptic and imposes the ligature on the basis of the umbilical cord.
26. Cuts the umbilical cord using scalpel 1-2 cm above the umbilical ring and enters the catheter to a depth of 3-4 cm.
27. Inject 0.1-0.3 ml/kg of 0.01% solution of adrenaline.
28. Evaluates the child's condition (heart rate - 100 per minute, saturation - 90%).

Check List "Initial care and resuscitation of a newborn child»

Student's first and last name _____

Faculty _____ Group _____

Date _____

№	ACTION	Quantity of the marks	
		1	0
1.	Hands wash, put gloves	1	0
2.	Evaluate the condition of a child at birth (mature, inactive).	1	0
3	Put a child wrapped in nappy on a back on table with a radiant heat.	1	0
4	To Provide a correct position (put a roll under the shoulder).	1	0
5	To carry out the respiratory tract sanitation (using a rubber syringe sucks the contents of the oral cavity first, then the nose cavity for 5 seconds).	1	0
6	Drying the child.	1	0
7	To take a wet diaper away.	1	0
8	To conducts tactile stimulation (by rubbing the back and extremities).	1	0
9	To provide a correct position again.	1	0
10	To evaluate breathing (absent).	1	0
11	To evaluate heart rate (70/min).	1	0
12	To attach a mask to the device for the lung ventilation under the positive pressure.	1	0
13	To attach a mask to the child's face (should cover the chin, mouth and nose).	1	0
14	To conduct the ventilation with air at a frequency of 40-60/min (breath-one-two), observing the chest movements.	1	0
15	To evaluate the respiration in 30 sec (absent).	1	0
16	To evaluate the heart rate (50/minute).	1	0
17	To attach a pulse oximeter to the child's right wrist (50% saturation).	1	0
18	To insert the tube into the trachea using a laryngoscope.	1	0
19	To connect the intubation tube to Ambu Bag.	1	0
20	To conduct the cardio-pulmonary resuscitation: indirect heart massage by pressing on the lower third of the sternum (under the nipple line) with thumbs, other fingers - under the child's back, and ventilation with 100% oxygen with ratio of 3:1 for every 2 seconds (and one, and two, and three, and breath).	1	0
21	To evaluate breathing in 60 sec after the cardio-pulmonary resuscitation (absent).	1	0
22	To evaluate the heart rate (50 per minute).	1	0
23	Evaluates saturation (65%).	1	0
24	Changes gloves to sterile.	1	0
25	To clean the umbilical cord with antiseptic and impose the ligature on the basis of the umbilical cord.	1	0
26	To cut the umbilical cord using scalpel 1-2 cm above the umbilical ring and enters the catheter to a depth of 3-4 cm.	1	0
27	To inject 0.1-0.3 ml/kg of 0.01% solution of adrenaline.	1	0
28	To evaluate the child's condition (heart rate - 100 per minute, saturation - 90%).	1	0
Points sum			
Summary (highlight required):		Passed	Did not pass

For evaluation 0 – 1: 0 point – not done; 1 point – done correctly

Station passed – points sum ≥ 22 Examiner _____ (Signature)

List of equipment and materials required for the pediatric station OSCE-2

"Initial care and resuscitation of a newborn child"

In order to arrange the work of the pediatric station, we ask to provide the necessary equipment and materials:

1. A table for resuscitation - 1 pc.
2. Lamp of radiant heat.
3. Manikin a newborn child for cardiopulmonary resuscitation - 2 pcs.
4. Equipment for artificial lung ventilation oxygen therapy:
 - resuscitation bag and face mask size "1" - 2 pcs .;
 - laryngoscope with a blade size № 1 - 2 pcs .;
 - endotracheal tube size 3,5-4,0 - 2 pcs.
5. Suction equipment (rubber syringes) - 2 pcs.
6. Kit for catheterization of the umbilical vein (scalpel, forceps, umbilical catheter 5F, syringe 10 ml) - 2 pcs.
7. Medicines (adrenaline, physiological solution) - 2 pcs.
8. Clothes (hat, socks) - 2 pcs.
9. Roller under the shoulder - 2 pc.
10. Neonatal stethoscope - 2 pcs.
11. Pulse Oximeter - 2 pcs.
12. Diapers - 10 pcs.
13. Disposable gloves - 500 pairs.
14. Antiseptic for hand wash - 5 pcs.
15. Ligature for the basis of a umbilical cord.

The president of the Pediatric
CSC professor

Pochynok T.V.