

ODESSA NATIONAL MEDICAL UNIVERSITY

MINISTRY OF HEALTH OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

Faculty: medical

(faculty name)

Department of pediatrics №1

(name of department)

Acting pro-rector for scientific and educational work

prof.  Svitlana KOTIUZHYNska

" " 2022 y

**METHODICAL RECOMMENDATION OF THE SEMINAR LESSON
FROM THE SELECTIVE EDUCATIONAL DISCIPLINE**

Faculty medical, course 6 _____

Selective educational discipline: "Emergencies in pediatric neurology".
(name of educational discipline)

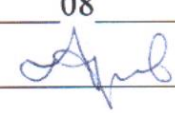
Seminar lesson No.4 "Differential diagnosis of intracranial hematomas due to trauma".
(name of topic)

Approve:

Meeting of the Department of Pediatrics №1 _____

Odessa national medical university

Protocol № 1 of " 29 " 08 2022 y .

Head of the department  (Mykola ARYAYEV)
(signature) *(name, surname)*

Developers: ***“Emergencies in pediatric neurology”***

Prof. Mykola ARYAYEV as. of prof. PhD Daria USENKO. as. of prof. PhD Larysa KAPLINA, as. Diana SELIMCHANOVA

Note. In the case of publication of methodological developments as an independent printed work, the academic council of the faculty provides a recommendation for publication in the presence of two reviews, one of which is external — from a reviewer of another institution of higher education

Topic: Differential diagnosis of intracranial hematomas due to trauma.

Purpose: The applicant's acquisition of additional knowledge and mastering of professional competences and communication skills with the parents of a child with an intracranial hematoma as a result of an injury accompanied by a coma, obtained in the course of studying the subject; promoting the development of creative thinking. The ability to logically express and argue one's thoughts, to listen to each other, to criticize productively.

Basic concepts: Intracranial hematomas due to trauma. Emergency care.

Equipment: a mannequin of a child under 5 years of age.

Study time: 2 hours.

Plan

I. Organizational moment (greetings, checking the audience, the message of the topic, the purpose of the lesson, the motivation of applicants to study the topic).

II. Control of basic knowledge (frontal survey on the basic terminology).

Questions to check basic knowledge on the topic of the seminar:

1. Intracranial hematomas due to birth trauma in newborns.
2. Pathophysiology of the consequences of asphyxia in premature babies.
3. Pathophysiology of comatose states due to brain injury in children.
4. Pediatric Glasgow coma assessment scale.

III. Discussion of theoretical issues:

1. Differential diagnosis of intracranial hematomas due to birth trauma in newborns (epidural, subdural, subarachnoid, intraventricular, intracerebral).
2. Differential diagnosis of intraventricular hemorrhages in premature newborns.
3. Assessment of the child's condition according to the Glasgow scale.
4. Emergency care for insects of various etiologies in children.

The discussion of theoretical issues can take place in the form of a role-playing game, answers to questions, debates, discussions, presentations with reports, abstracts, discussion of reports and abstracts, reviewing applicant answers, etc.)

Topics of role-playing games/reports/abstracts

1. Epidural hematoma due to birth trauma in newborn children, clinic, diagnosis, emergency care.
2. Subdural hematomas due to birth trauma in newborn children, clinic, diagnosis, emergency care.
3. Subarachnoid hematoma due to birth trauma in newborn children, clinic, diagnosis, emergency care.
4. Intraventricular hemorrhages due to birth trauma in newborn full-term and premature children, clinic, diagnosis, emergency care.
5. Intraventricular hemorrhages due to newborn premature babies, clinic, diagnosis, emergency care.
6. Intracerebral hemorrhages in children due to birth trauma, differential diagnosis, emergency care.

Applicants can prepare didactic visual guides in the form of tables, code diagrams, slides, drawings, portraits of famous specialists, preparations during preparing a report, role-playing game, abstract, analytical review, etc.

IV. Summary of results.

Basic:

1. Nelson textbook of pediatrics, 2 volume set. Edition: 21st, 2019. PDF format. <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>
2. Vinod K Paul, Arvind Bagga. Ghai Essential Pediatrics, 8th edition, 2013. PDF format.

Additionally:

1. Charles A.Pohl, Leonard G.Gomella. Pediatrics On-Call Problems, 2006. PDF format.
2. Exo J, Smith C, Smith R, Bell M. Emergency treatment options for pediatric traumatic brain injury. *Ped Health*. 2009;3(6):533-541. doi: 10.2217/phe.09.54.
3. Cohadon F, Richer E, Castel JP. Head injuries: incidence and outcome. *J. Neurol. Sci*. 1991;103 Suppl.:S27–S31.
4. Morris KP, Forsyth RJ, Parslow RC, et al. Intracranial pressure complicating severe traumatic brain injury in children: monitoring and management. *Intensive Care Med* 2006;32:1606-12.
5. Khanna S, Davis D, Peterson B, et al. Use of hypertonic saline in the treatment of severe refractory posttraumatic intracranial hypertension in pediatric traumatic brain injury. *Crit Care Med* 2000;28:1144-51.
6. Juul N. Intracranial hypertension and cerebral perfusion pressure: influence on neurological deterioration and outcome in severe head injury. The Executive Committee of International Salfotel Trial. *J Neurosurg* 2000;92:1-6.
7. The Joint Venture of The Brain Trauma Foundation; The American Association of Neurological Surgeons; The Congress of Neurological surgeons; The Joint Section of Neurotrauma and Crit Care: Guideline for Management of Severe Trauma Brain Injury. Brain Trauma Foundation 2000(Copyright):1-14.
8. Dicarlo JV. Frankel IR. Intracranial hypertension . In: Behrman RE, Kliegman RM. Jenson HB, eds. Nelson Text Book of Pediatrics. 17th ed. Philadelphia: Saunders 2004:310-1.
9. Adelson PD, Bratton SL, Carney NA, et al. Guidelines for the acute medical management of severe traumatic brain injury in infants, children, and adolescents. *Pediatr. Crit. Care Med*. 2003;4(3 Suppl):S1–S73.
10. Chaiwat O, Sharma D, Udomphorn Y, et al. Cerebral hemodynamic predictors of poor 6-month Glasgow Outcome Score in severe pediatric traumatic brain injury. *J. Neurotrauma*. 2009;26(5):657–663.
11. Pigula FA, Wald SL, Shackford SR, et al. The effect of hypotension and hypoxia on children with severe head injuries. *J. Pediatr. Surg*. 2003;28(3):310–314. discussion 315–316.
12. Jagannathan J, Feustel PJ, Graca L, et al. Long-term outcomes and prognostic factors in pediatric patients with severe traumatic brain injury and elevated intracranial pressure. *J. Neurosurg. Pediatr*. 2008;2(4):240–249.
13. Adelson PD, Clyde B, Kochanek PM, et al. Cerebrovascular response in infants and young children following severe traumatic brain injury: a preliminary report. *Pediatr. Neurosurg*. 1997;26(4):200–207.

14. Khanna S, Davis D, Peterson B, et al. Use of hypertonic saline in the treatment of severe refractory posttraumatic intracranial hypertension in pediatric traumatic brain injury. *Crit. Care Med.* 2000;28(4):1144–1151.
15. Shankaran S, Laptook AR, Ehrenkranz RA, et al. Whole-body hypothermia for neonates with hypoxic-ischemic encephalopathy. *N. Engl. J. Med.* 2005;353(15):1574–1584.
16. Hutchison JS, Ward RE, Lacroix J, et al. Hypothermia therapy after traumatic brain injury in children. *N. Engl. J. Med.* 2008;358(23):2447–245.