



LIETUVOS SVEIKATOS MOKSLŲ UNIVERSITETAS

KAUNO MEDICINOS UNIVERSITETAS

PATVIRTINTA
Kauno medicinos universiteto
Senato
2004 m. gruodžio 17 d.
Nutarimu Nr. 3-11

ATNAUJINTA
2013 m. gruodžio 20 d.

CENTRINĖS NERVŲ SISTEMOS KRAUJAGYSLIŲ LIGOS

DOKTORANTŲ ROS STUDIJŲ DALYKO PROGRAMA

Dalyko programos koordinatorius:

Neurochirurgijos klinika, prof. habil. dr. Arimantas Tamašauskas

padalinio pavadinimas, vadovo pareigos, pedagoginis vardas, mokslo laipsnis, vardas, pavard

_____ parašas

Padaliniai, dalyvaujantys dalyko programoje:

1. Neurochirurgijos klinika, prof. habil. dr. Arimantas Tamašauskas

padalinio pavadinimas, vadovo pedagoginis vardas, mokslo laipsnis, vardas, pavard

_____ parašas

Kaunas, 2013

Dalyko programos duomenys

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| Moksl sritis | Biomedicinos mokslai |
| Moksl kryptis (kodas) | medicina – 06B |
| Dalyko pavadinimas | Centrin s nerv sistemos kraujagysli ligos |
| Programos apimtis | 160 val. (6 ECTS) |
| Paskaitos | 60 val. |
| Seminarai | 20 val. |
| Savarankiškas darbas | 80 val. |

Dalyko programos rengimo grup

| Eil. Nr. | Pedagoginis vardas, vardas, pavard | Pareigos | Telefonas (darbo) | Elektroninio pašto adresas |
|----------|------------------------------------|--------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------|
| 1 | Prof. Arimantas Tamašauskas | Klinikos vadovas | 326472 | arimantas.tamasauskas@kaunoklinikos.lt |
| 2 | Prof. Vytenis Pranas Deltuva | Galvos smegen chirurgijos sk. vadovas | 326549 | vytenis.deltuva@kaunoklinikos.lt |
| 3 | Doc. Giedrimantas Bernotas | Neurochirurgas | 326022 | bernotas@kmu.lt |
| 4 | Doc. Algimantas Matukevicius | Vaik neurochirurgijos sk. vadovas | 326955 | algimantas.matukevicius@kaunoklinikos.lt |
| 5 | Doc. Kazys Vytautas Ambrozaitis | Neurochirurgas | 326577 | kazys.ambrozaitis@kaunoklinikos.lt |
| 6 | Dr. Egidijus Marcinkevicius | Galvos smegen chirurgijos sk. Kraujagysli sektoriaus vadovas | 326024 | egidijus.marcinkevicius@kaunoklinikos.lt |
| 7 | Doc. Kstutis Skauminas | Neurochirurgas | 326883 | kestutis.skauminas@ismuni.lt |
| 8 | Doc. Rimantas Vilcinis | Galvos smegen traum sk. vadovas | 326821 | rimantas.vilcinis@kaunoklinikos.lt |
| 9 | Doc. Vytautas Ragaišis | Neurochirurgas | 326943 | vragaisis@yahoo.com |
| 10 | Dr. Gintautas Vaitkevicius | Neurochirurgas | 326577 | gintasva@one.lt |

Dalyko programos aprašas:

1. Dalyko programos poreikis:

- Išanalizuoti naujausius mokslin s literat ros duomenis apie smegen kraujagysli susirgimus, j etiopatogenez , diagnostik ir gydym .
- Supažindinti su nagrin jam susirgim epidemiologija
- Supažindinti su nagrin jamos susirgim profilaktikos galimyb mis

- Išmokyti atpažinti skirtingus CNS kraujagyslių susirgimus
 - Išmokyti parinkti optimali diagnostikos ir gydymo taktik
 - Išmokyti kritiškai vertinti moksliniuose straipsniuose pateiktus duomenis.
 - Išmokyti organizuoti CNS kraujagyslių susirgimų mokslinius tyrimus.
2. Dalyko programos tikslai: išanalizuoti etiopatogenetinius galvos ir nugaros smegenų kraujagyslių ligų faktorius, supažindinti su pagrindiniais tyrimo, gydymo taktikos pasikeitimais, naujausiais gydymo metodais bei rezultatais.
 3. Dalyko programos sandara, turinys ir studijų metodai:
 Apimtis – 4 kreditai (160 valandų):
 a) Paskaitos – 60 val.
 b) Seminarai – 20 val.
 c) Savarankiškos studijos – 80 val.
D stytojai:
 A.Tamašauskas – prof., habil. dr., neurochirurgas
 V.Deltuva – dr., neurochirurgas
 G.Bernotas – dr., neurochirurgas
 4. Metodinis dalyko programos aprašymas:
vertinimas Suminis balas: 100% balo sudaro: 40-50% auditorinio darbo + 20-30% savarankiško darbo + 20-40% baigiamojo teorinio ir praktinio patikrinimo.

TEORIN DALIS

| Eil. Nr. | Paskaitos pavadinimas | Trukmė | D stytojas |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------|
| 1. | CNS kraujagyslių anatomija Smegenų kraujagyslių struktūra ir inervacija. Vilksijaus rato chirurginė anatomija, arterijų maitinamos smegenų zonos. Galvos smegenų veninė sistema. Nugaros smegenų kraujagyslių chirurginė anatomija. | 3 val. | Doc. G. Bernotas |
| 2. | CNS kraujotakos fiziologija Smegenų kraujotakos autoreguliacijos mechanizmai. Neurogeninė ir metabolinė CNS kraujotakos reguliacija. Kolateralinė kraujotaka. Hematoencefalinis barjeras. | 3 val. | Prof. habil.dr. A. Tamašauskas |
| 3. | Kritinės būklės, esant CNS kraujotakos sutrikimams Smegenų edema didelis smegenų kraujotakos sutrikimas. Koma. Intensyvi terapija. Prognostika. | 3 val. | Doc. R.Vilcinis |
| 4. | Smegenų kraujotakos sutrikimai eksperimente Eksperimentiniai smegenų insulto modeliai. Chirurginis ir medikamentinis insulto sukūlimo metodai. Tyrimų rezultatai ir tyrimų metodai. | 3 val. | Prof. habil.dr. A. Tamašauskas |
| 5. | CNS kraujagyslinių susirgimų epidemiologija Informacijos paieška. Pagrindiniai CNS kraujagyslių susirgimų epidemiologiniai rodikliai. Sergamumas, mirtingumas, mirštamumas. Rizikos faktoriai. | 3 val. | Prof. habil.dr. A. Tamašauskas |
| 6. | Smegenų kraujagyslių aterosklerozė (Dr. Etiopatogenezė, klinikinė išraiška, diagnostika, rizikos faktoriai. Aterosklerozės | 3 val. | Prof. V.Deltuva |

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| | taka galvos smegen kraujagysli susirgimams. Gydomas ir profilaktika. | | |
| 7. | CNS kraujagysli tyrimo metodai Laboratoriniai tyrimai. Skaitmenin angiografija, ultragarsinis kraujotakos tyrimas transkranijiniu dopleriu ir duplex skaneriu, kompiuterin tomografija, magnetinio rezonanso tyrimas, SPECT. J privalumai ir tr kumai nustatant galvos smegen kraujagysli susirgimus. | 3 val. | Doc. G. Bernotas/dr.E.Marcinkevi ius |
| 8. | Extracerebrini kraujagysli susirgimai Miego arterij asimptomin stenoz , kritin stenoz , tromboz . Kolateralin kraujotaka. Slankstelini arterij stenoz , tromboz aortos lanko srityje ir kaklo srityje. Retos smegen išemij sukelian ios priežastys: navikai, trauminiai pažeidimai, osteofitai, tarpslankstelini disk išvaržos, reti sisteminiai kaklo kraujagysli susirgimai. | 3 val. | Doc. K.Ambrozaitis/dr. G.Vaitkevi ius |
| 9. | Galvos smegen kraujagysli patologija Ateroskleroz , amiloidin angiopatija, cerebralinis angiitas, trombembolija iš magistralini smegen kraujagysli ir kardiogenin embolizacija, reti susirgimai. J etiopatogenez , paplitimas, diagnostika ir gydymas. | 3 val. | Doc. G. Bernotas/dr.E.Marcinkevi ius |
| 10. | Smegen infarkto klinika, diagnostika ir medikamentinis gydymas. Etiopatogenez , paplitimas. Vilisijaus rato arterij okliuzijos simptomatologija ir klinikiniai sindromai: Lakunariniai infarktai, ataksin hemiparez , disartrija, sensorikos sutrikimai, kalbos sutrikimai. Smegen infarkto tipai: praeinantis išeminis neurologinis deficitas, RIND, stabilus infarktas, progresuojaninis infarktas, multiinfarktini b kl . Medikamentinio gydymo galimy b s. | 3 val. | Prof. V. Deltuva |
| 11. | Smegen infarkto chirurginis gydymas ir reabilitacija Indikacijos. Endarterektomija, Ekstra-intrakranialiniai mikronuosr viai, kitos revaskuliarizacijos proced ros, embolektomija. Ankstyvoji ir v lyvoji reabilitacija, prognoz . | 3 val. | Doc. G. Bernotas/dr.E.Marcinkevi ius |
| 12. | Subarachnoidin hemoragija. Epidemiologija. Patofiziologiniai smegen ir kraujotakos ypatumai esant subarachnoidinei hemoragijai. Etiopatogenez , klinika, diagnostika (neinvazin , invazin), gydymas (medikamentinis, chirurginis). Indikacijos chirurginei intervencijai. | 3 val. | Doc. A.Matukevi ius/doc. V.Ragaišis |
| 13. | Maišin s smegen arterij aneurizmos | 3 val. | Prof. habil.dr. A. Tamašauskas |

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| | Maišini aneurizm tipai ir lokalizacija, formavimosi teorijos, klinika. Kraujavimas, jo pob. dis. Tipin ir atipin eiga. Diagnostika. Gydomo taktika ir indikacijos chirurginiam gydymui. Chirurginio gydymo metodai ir prognoz . | | |
| 14. | Vasospazmas Etiopatogenez , ankstyvieji ir v lyvieji arterij ir smegen poky iai, klasifikacija, klinikinis pasireiškimas, gydymo metodai (medikamentinis, endovaskulinis, chirurginis). | 3 val. | Doc. G. Bernotas/dr.E.Marcinkevi ius |
| 15. | Arteriovenin s malformacijos Arteriovenini malformacij tipai ir lokalizacija, formavimosi teorijos, klinika (asimptomin , apvogimo, epilepsija, galvos skausmas). Kraujavimas, jo pob. dis. Tipin ir atipin eiga. Diagnostika. Gydomo taktika ir indikacijos chirurgijai. Chirurginio gydymo metodai ir prognoz . | 3 val. | Prof. habil.dr. A. Tamašauskas |
| 16. | Retos galvos smegen kraujagysli ligos Dura mater AVM, fibromuskulin displazija, ven tromboz , Moya-Moya liga, koaguliopatijos. Diagnostika, medikamentinis ir chirurginis gydymas. | 3 val. | Prof. habil.dr. A. Tamašauskas/ doc. K.Skauminas |
| 17. | Karotido-kavernin s fistul s. Etiologija ir klasifikacija, radiologin klasifikacija. Patofiziologija, klinikinis sindromas. Diagnostika ir diferencin diagnostika. Konservatyvaus ir chirurginio gydymo indikacijos, metodai, prognoz . | 3 val. | Prof. V. Deltuva/doc. K.Skauminas |
| 18. | Hemoraginiai insultai Epidemiologija, etiopatogenez , patofiziologija, klinikinis pasireiškimas, chirurgin klasifikacija, diagnostika, konservatyvaus ir chirurginio gydymo indikacijos, metodai, prognoz . | 3 val. | Dr. G. Bernotas |
| 19. | Nugaros smegen kraujagysli susirgimai Išemija, etiopatogenez , diagnostika, gydymo taktikos parinkimas. gimtos nugaros smegen kraujagysli ligos, pasireiškimo tipai, etiopatogenez , klinika, diagnostika, prognoz , ankstyvoji ir ilgalaik reabilitacija. | 3 val. | Doc. K.Ambrozaitis/dr. G.Vaitkevi ius |
| 20. | CNS kraujagysli susirgimais sergan i j reabilitacija Bendrieji principai, Veiksniai, nulemiantys pac sveikim . Kalbos sutrikim atstatymas. Jud jin funkcij atstatymas, esant stuburo ir galvos sme funkcijos sutrikimams. | 3 val. | Prof. habil.dr. A. Tamašauskas/ Doc. R.Vilcinis |

TEORIN -PRAKTIN DALIS

| Eil. Nr. | Seminaro temos pavadinimas | Trukm | D stytojas |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------|
| 1. | Diferencin diagnostika CNS kraujotakos sutrikimus primenan i susirgim analiz ir tyrimo metodai, galinantys nustatyti diagnoz . Tyrimo metod patikimumo vertinimas. Praktin s užduotys, vertinant CNS angiologinius susirgimus. | 4 val. | Prof. V. Deltuva |
| 2. | Chirurgini gydymo metod apžvalga. Chirurginiai instrumentai, monitoravimas operacijos metu, pooperacinis sekimas ir tyrimai. Diagnostikos ir gydymo algoritm analiz . | 4 val. | Doc. G. Bernotas, doc. K.Skauminas |
| 3. | Video medžiagos analiz . Analizuojama CNS kraujagysli operacij videomedžiaga | 4 val. | Dr.E.Marcinkevi ius |
| 4. | Mokslini medicinini straipsni kritin analiz Doktorantai pristato perskaityt straipsni analiz . | 4 val. | Prof. habil.dr. A. Tamašauskas |
| 5. | Mokslini pranešim bei tezi ruošimas. Doktorantai ruošia ir analizuoja tezi , pranešim , paskait , pranešim projektus iš savo vykdomo darbo srities ir medžiagos. | 4 val. | Prof. habil.dr. A. Tamašauskas |

SAVARANKIŠKAS DARBAS

Priedas Nr. 1

Rekomenduojama literat ra

Literatūros sąrašas aneurizmoms

1. The International Study of Unruptured Intracranial Aneurysm Investigators. Unruptured intracranial aneurysms -- risk of rupture and risks of surgical intervention. N Engl J Med 1998; 339:1725-1733.
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