

Eesti neuroloogia ja neurokirurgia arengu peegeldusi teaduslikus välisperioodikas

Ain-Elmar Kaasik

dr.med.dr.h.c.(Uppsala)



Facta non solum verba



Ludvig Puusepp

(1875-1942)

2. detsembril 1920:

Tartu Ülikooli

neuroloogiaprofessor

ja Närvikliiniku

direktor

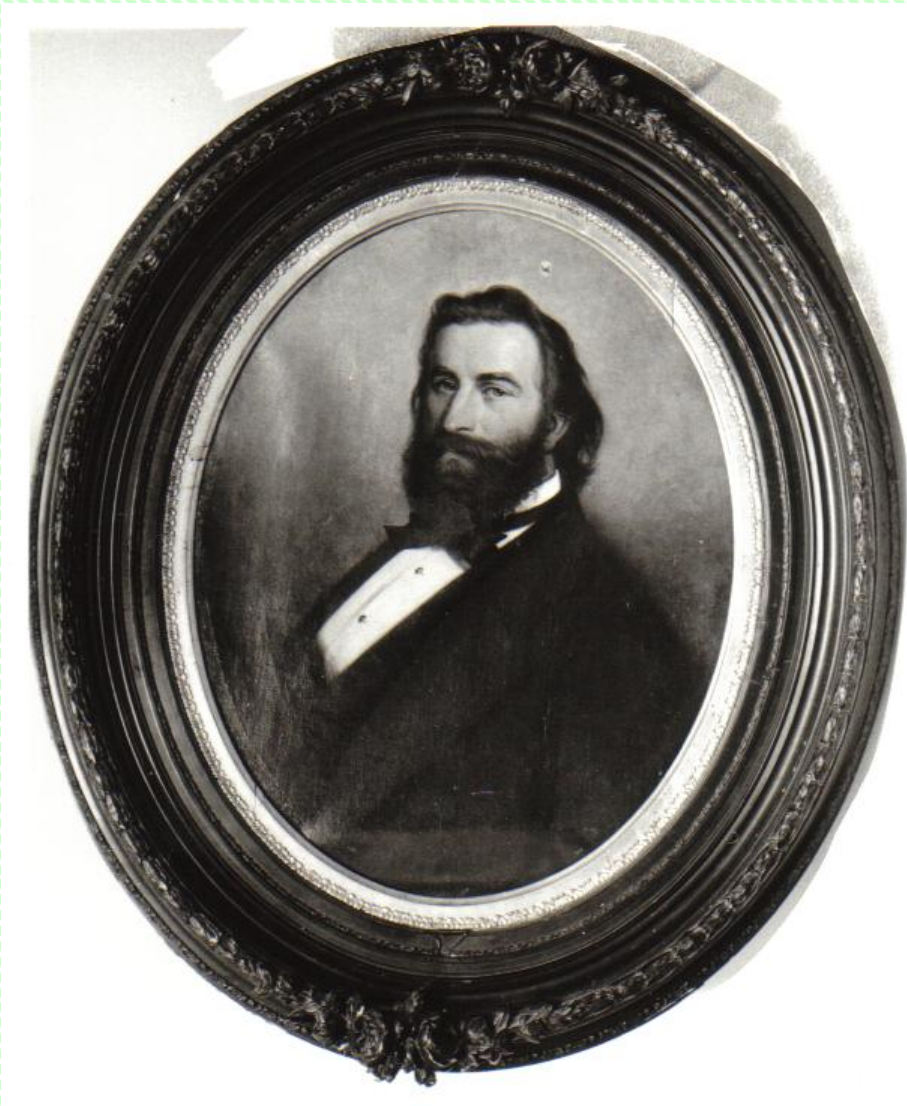
Enne Puuseppa:

Heinrich Unverricht (1853 Breslau (Wroclaw) -
- 1912 Magdeburg)

Eripatoloogia ja sisehaiguste professor Tartus 1889-
1892 (3 a.)

1891 monograafia “*Die Myoklonie*” →

Unverricht-Lundborgi tõbi



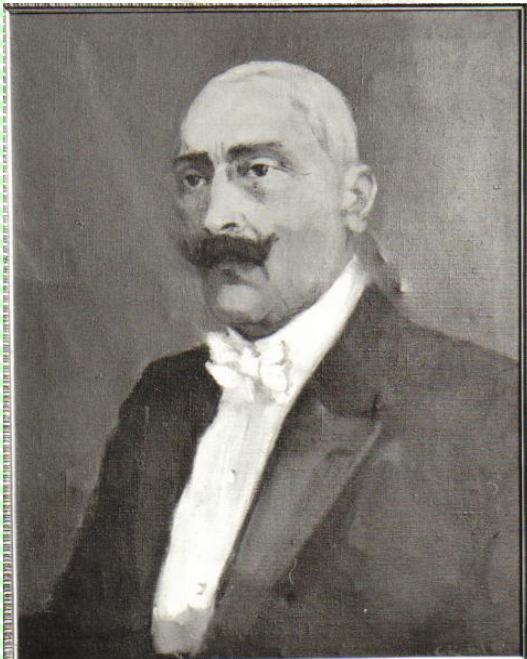
**Ernst Gustav
Benjamin von
Bergmann (1836-
1907)**
Kirurgiaprofessor
1871-1878 (7 a.)
Tartus monograafia
koljutraumadest
Würzburgi → Saksa
neurokirurgia rajajaid



Nikolai Nilovich Burdenko
(1876-1946)

Lõpetas 1906 TÜ, 1917
kirurgiaprofessoriks

1918 Voroneži → Moskvasse,
Vene neurokirurgia rajajaid



**Maximilian Friedrich
Werner Zoege von
Manteuffel (1857-1926)**

A.-E.Kaasik, M.Mägi “Development of neurology and
neurosurgery in Estonia” Acta et Comment. Univ.
Tartuensis 1994, 971:9-15

Puusepp tuntud ja
tunnustatud Eestis ja
1920.-1930.

aastail ka välismail

Die Tumoren des Gehirns, 1929,
726 lk. Barcelonas 1931

1932-1939 *Chirurgische
Neuropathologie*, 2,5 kd.

1923-1939 *Folia
Neuropathologica Estoniana*,
17 kd.

Folia Neuro-Chirurgica.

(Folia Neuropathologica Estoniana.)

Prof. Ludovicus Puusepp
Redactor.

Priv.-Doc. Dr. med. J. Rives, Priv.-Doc. Dr. med. E. Weinberg,
Dr. med. W. Lindeberg
Secretarii.

Volumen IX.

Tartu (Dorpat)
1929.

Title page of vol. IX.

ARTIKLITE AUTORITEKS:

Bechterew ja Polenov (Leningrad),

Rossolimo (Moskva),

Mingazzini (Rooma),

Marburg (Viin),

Freeman (Philadelphia),

Van Bogaert (Brüssel),

Guillain ja Alajonanine (Pariis),

Marinesco (Bukarest),

Dandy (Baltimore),

Walker (Chicago),

Ley (Barcelona)

Kaasik, A-E. A former medical journal. Comments on the *Folia Neuropathologica Estoniana* (1923-1939). *Ludvig Puusepp 125*, University of Tartu, Estonian Academy of Sciences, Tartu-Tallinn, 2000

1922 - Padua Ülikooli audoktor

1929 - Vilniuse (Poola) Ülikooli audoktor

Portugali Teaduste Akadeemia korresp. liige

1938 - Eesti Teaduste Akadeemia asutajaid (12)

1960-d aastad

Väliskontaktide kujunemise algus

Professor Puusepp ja Eesti - tundmatud ka lähinaabritele

Mihhail Juljevich Rapoport: Ülevaade

neurokirurgia arengust (“Otechestvennoi

neirohirurgii”), 1965: Puusepp mainimata

1967/1968 Lundi kogemus (ka Kopenhaagen, Karolinska)

1971 Euroopa Neurokirurgide Kongress Prahas

Professor **Adolfo Ley**

Professor **Paul C. Bucy** (USA) ajak. “*Surgical Neurology*”

* Ernst Raudam and Ain-Elmar Kaasik: Ludvig Puusepp
1875-1942, *Surg.Neurol.* 1981, 16, 2:85-87

Elu ja tegevus

Kreedo: “...*Therefore it is obvious that it is time for neurologists to become surgeons in their field, and treat disorders of the nervous system not only with drugs and physical therapy, but also with the scalpel*”

* *ibid.* In: Paul C. Bucy (Ed.) *Neurosurgical Giants: Fleet on Clay and Iron.* Elsevier, New York-Amsterdam-Oxford 1985, 283-287

1995-1999

- * **Bengt Ljunggren** (AI Ain, Araabia Ühendemiraadid)
- * **Christer Ljungman** (AI Ain, Araabia Ühendemiraadid)
- * **Ilo Käbin** (Stockholm, dr.med. Lündi Ülikoolist)

*Die medizinische Forschung und Lehre an der Universität
Dorpat/Tartu 1802-1940. Ergebnisse und Bedeutung für die
Entwicklung der Medizin.*

Sydsvenska medicinhistoriska sällskapets årsskrift.

Supplementum 6/1986, 628 pp.

- * **Michael Buchfelder** (Erlangen, Saksamaa)

* **Oliver Ganslandt** (Erlangen, Saksamaa)

* **George Bruyn** (Leiden, Holland)

7 artiklit: Ernst von Bergmanni, Werner Zoege von
Manteuffeli ja eriti Ludvig Puusepa panusest
arstiteaduse arengusse

Ainsale kolleegile-sõbrade
Prof. Ain-ilmari Kaasik'ule
parimate soovidega!
Jlo

Early Neuroscience Research at the Medical Faculty of Tartu University in Estonia

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*Division of Neurosurgery, Faculty of Medicine and Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates; †Lund University, Lund, Sweden; ‡Department of Neurology, Leiden University, Leiden, The Netherlands; §Department of Neurosurgery, Erlangen-Nürnberg University, Erlangen, Germany

Summary: In 1632, King Gustav Adolf II of Sweden founded a university, the Academia Gustaviana, in Tartu in Estonia, which at that time was part of Sweden. After the Swedish defeat in the Great Nordic War in 1710, Estonia became part of Russia. The University of Tartu was then closed until 1802, when Czar Alexander I ordered its reopening with the intention of attracting Western culture and science to Russia. The medical faculty of Tartu University drew distinguished neuroscientists from around the world, among them Kupffer, Rauber, Schmidt, Buchheim, Schmiedeberg, von Bergmann, Kernig, and Puusepp, and became a flourishing academic eastern outpost in medicine. After suffering severe setbacks and destruction in the 20th century, Tartu University has once again begun to flourish after the liberation of Estonia in 1991. **Key Words:** Estonia—Tartu University—History of neurosciences.

Estonians are among the oldest nationalities in Europe and have lived for thousands of years on an area of about 45,000 square kilometers bordering the Baltic Sea and the Gulf of Finland (Fig. 1). Until the beginning of the second millennium, Estonians lived much like their Scandinavian neighbors, the Vikings. The present capital of Estonia, Tallinn, was known to the Arabic geographer Abu Abdallah Mohammad al-Idrisi, who depicted the town on his map of the world as *Qualawen* in 1154. In the 13th century, Danish and German crusaders conquered Estonia, and in the next century the Estonians made a desperate attempt to liberate their country. In the 15th century—the age of the Hanseatic League—ravaging expeditions were undertaken in the Baltic Sea by the Crusaders, pirates from neighboring countries. These ravages ceased in the 16th century after long wars among the Russians, Poles, and Swedes. In 1558, Czar Ivan the Terrible conquered Estonia, leading to a massacre of Estonians, especially the male population. In the

next century, however, Estonia fell entirely under Swedish dominion—known as “the good old Swedish time.”

Founding of Tartu University

The first university in Sweden was founded on the Swedish mainland in Uppsala in 1477. In 1632, King Gustav Adolf II founded a second Swedish university, the Academia Gustaviana, in Tartu in eastern Estonia. The universities in Åbo (today Finland) and Lund were founded in 1640 and 1668; the first Russian university, in Moscow, opened in 1755. In 1656, Tartu was again conquered by the Russians, and academic activities were halted until 1690, when the university was reopened, now under the name of Academia Gustavo Carolina.

The Nordic War

In November 1700, the devastating Nordic War broke out, with young King Charles XII of Sweden winning the first battle against his Russian antagonist, Czar Peter the

Address correspondence and reprint requests to: Prof. Bengt Ljunggren, Division of Neurosurgery, Dept. of Surgery, Faculty of Medicine, United Arab Emirates University, P.O. Box 17666 Al Ain, United Arab Emirates.

Ludvig Puusepp—Founder of Estonian Neurosurgery and Harvey Cushing's Eastern Hemisphere Counterpart

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Summary: Ludvig Puusepp (1875–1942) became the world's first professor in neurosurgery in 1910 in St. Petersburg, and was then active from 1920 until his death in 1942 at the University of Tartu in Estonia. He involved himself in all types of neurosurgical procedures, suggested many innovative surgical improvements, and created an exemplary neurosurgical clinic in Estonia. He also published papers on every conceivable subject of conventional neurosurgery, and books on the surgery of brain tumors and the nervous system. Puusepp was an excellent and dynamic neurosurgeon whose active period—1899 to 1939—exactly coincided with that of Harvey Cushing. It may be concluded that Puusepp was Cushing's counterpart in the Eastern hemisphere. **Key Words:** Ludvig Puusepp—Vladimir Bekhterev—Tartu University—Harvey Cushing—Neurosurgical history.

The Estonian counterpart to Harvey Cushing (1869–1939) was Ludvig Puusepp (1875–1942), a pupil of the founder of Russian neurology, Vladimir Bekhterev. Puusepp introduced and perfected surgery of the nervous system as a specialty in St. Petersburg, Russia, where he was appointed professor of surgical neuropathology in April 1910. Soon after the Bolsheviks seized power, Puusepp left St. Petersburg and moved to the University of Tartu in his father's native country, Estonia. As Earl Walker¹ noted,

“With the outbreak of the Russian Revolution Puusepp's life was endangered. It is said that when Red soldiers threatened him, hospital attendants swore he was a manual laborer. Then, when the rioters had left, Puusepp asked what his assistants had done to get him his freedom. ‘Is not a surgeon a manual laborer?’ was the laconic reply.”²

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His departure from Petrograd left a decade-long vacuum in Soviet neurosurgery.

The University of Tartu almost immediately (December 1920) appointed him professor of neurology and director of neuropathology at the Hospital for Nervous Diseases. Apart from his appointment as professor, Puusepp was also made medical officer with the rank of general in the Estonian Army, which fought Estonia's war of liberation against its giant Eastern neighbor with much success after the end of World War I.

Puusepp's arrival in Estonia ushered in a new era in clinical neurology^{3–21} and surgical neurology specifically. Puusepp was a dynamic man with broad interests, ranging from improving neurodiagnostic and neurosurgical procedures^{22,23} to purely scientific research²⁴ and pioneering experimental central nervous system transplantation surgery.^{25–27} He started out by separating the teaching of neurology and surgical neurology from teaching in psychiatry. He soon created a strong neurologic and neurosurgical unit, which included an operating room, a specially equipped neuroradiologic suite, a laboratory for histopathologic examinations, and a unit for physical therapy. The clinic in Tartu attracted a series

Bibliograafia

1. Ljunggren, B., G. Bruyn, I. Käbin, M. Buchfelder:
From cobbler's son to Professor of Neurosurgery. Emirates Med. J. 1995, 13: 222-234 (13 lk.)
2. Ljunggren, B., C. Ljungman, I. Käbin, O. Ganslandt, M. Buchfelder, G. Bruyn: Ernst von Bergmann - Baltic pioneer cranial surgeon. Emirates Med. J. 1997, 15: 38-43 (6 lk.)
3. Ljunggren, B., I. Käbin, O. Ganslandt, M. Buchfelder, G. Bruyn:
The surgeon's glove: a centennial. Neurosurg. Quart. 1998, 8, 1: 42-47 (6 lk.)
4. Ljunggren, B., I. Käbin, G. Bruyn, M. Buchfelder:
Early neuroscience research at the medical faculty of Tartu University in Estonia. Neurosurg. Quart. 1998, 8, 2: 88-91 (4 lk.)

5. Ljunggren, B., G. Bruyn, I. Käbin, G. Buchfelder:
Ludvig Puusepp and the birth of Neurosurgery in Russia. Neurosurg. Quart. 1998, 8, 3: 232-235 (4 lk.)

6. Ljunggren, B., G. Bruyn, I. Käbin, G. Buchfelder:
Ludvig Puusepp - founder of Estonian neurosurgery and Harvey Cushing's Eastern hemisphere counterpart. Neurosurg. Quart. 1998, 8, 4: 261-270 (10 lk.)

7. Ljunggren, B., I. Käbin, O. Ganslandt, G. Buchfelder, G. Bruyn:
Baltic pioneers and the vasomotor response. Neurosurg. Quart. 1999, 9, 1: 21-32 (12 lk.)

Kirjutiste sisu

Kaks kõige olulisemat, üksteist täiendavat

* *From cobbler's son to Professor of Neurosurgery*

Emirates Med. J. 1995, 13: 222-234

* *Ludvig Puusepp - founder of Estonian
neurosurgery and Harvey Cushing's Eastern
hemisphere counterpart*

Neurosurg. Quart. 1998, 8, 4: 261-270

Peterburi periood:

- * Ludvig Puusepa elukäik
- * “*Handpicked by the founder of Russian neurology, Vladimir Bechterev (1857-1927)*”
- * Esimene USA visiit 1909 (korduvalt 1930-kohtus Cushing’iga), seejärel tuumorite füsioloogilise enukleatsiooni meetod (1913)
- * Naissoost arstiüliõpilased USA-s (*Russkii Vrach*, 1910)
- * Esimene peaaju tuumori operatsioon Venemaal 1896 Obuhhovi haiglas Peterburis (G. Zeidler)
Tagumise koopa tuumor, dgn.-tud internist **Vladimir (Woldemar) Kernigi** (1840-1917) poolt, oli Tartu vilistlane

- 1899, Puusepp (24) - kranio-tserebraalse trauma operatsioon

* Sõjakogemused: Vene-Türgi (Plevna)

Vene-Jaapani 1904-1905

* 1910-1920 professor Peterburis

** Seda perioodi käsitleb põhjalikumalt artikkel “*Ludvig Puusepp and the birth of Neurosurgery in Russia*”

Neurosurg. Quart. 1988

Tartu period

“Estonians belong to one of the oldest nationalities in Europe and have lived many thousands years on an area covering approximately forty-five thousand km² with a coastline on the Baltic Sea and the Gulf of Finland” (Ljunggren et al. 1998)

Ajalugu, erinevad valitsejad

Tartu Ülikool: erinevad perioodid

Väljapaistvad 19.saj. teadlased: Bidder, Volkmann, Rathke, Kupffer, Carl Schmidt, Schmiedeberg, Alexander Schmidt, von Bunge, Lunin

** Professor of Neurosurgery in Estonia: Tartu years (1920-1942)*

Kliiniku loomine, õppetöö korraldamine

Folia Neuropathologica Estoniana

haige demonstratsioon 1923 : *Encephalitis lethargica*

jääknähud → viienda varba abduktsioon

“RÉFLEXE DU PETIT ORTEIL”: *Presse médicale* 1923

Itaalia neuroloog A. Coppola 1924 *Puusepp's reflex*

Babinski: vaid osa *“SIGNE DE L'ÉVENTAIL”* 'ist, mida kirjeldanud 1896

Diskussioon Société de Neurologie de Paris (1924)

Prof. Puusepa osavõtul

- * Radioloogia arendamine: **Schmuel Zlaff** (1903-1941)
- * Visiit **Herbert Olivecrona** (1891-1980) ja **Erik Lysholmi** (1891-1947) juurde Serafimerlasarettis 1937
- * 1929 IKR rõhk ventrikulograafia ajal
- * Epilepsia ja vaimuhaigused (psühhokirurgia)
1936-1939 opereeris korduvalt Racconigi vaimuhaiglas
Torinos
- * Tuntuimad õpilased:
 - Johannes Riives**
 - Alfons Ley**
 - Voldemar Üprus**
 - Ernst Raudam**

*** Ludvig Puusepp kui inimene**

“He was certainly an eclectic, maybe even an eccentric man, who preferred an eventful life and hated defeat, even in games such as tennis (in which his wife was often his opponent), chess, and bridge, which he enjoyed whenever he had an hour to spare”

(Raudam E, Kaasik A-E. *Surg. Neurol*, 1981, 2:85-87)

“Puusepp is probably not as well known as he deserves among Westerners because his many publications and textbooks were published in Russian, Estonian, German or French”.

125 viidet, vaid 10 teistele autoritele

Prof. Ludvig Puusepa täiuslikem bibliograafia

* *Early neuroscience research at the medical faculty of Tartu University in Estonia Neurosurg. Quart. 1988, 8, 2: 88-91*

Info haaratud ka eelpool refereeritud “suurde” artiklisse

Eesti ja eestlased

Tartu Ülikool

Põhjasõda

Teaduslik aktiivsus 19. sajandil

Tartu Ülikool 20. sajandil

Venestamine

Vabadussõda → Tartu rahu 3. I 1920

Eesti Ülikool

Ludvig Puusepp

1940.aasta invasioon

Saksa okupatsioon

21. VIII 1991 iseseisvus

The surgeons glove: a centennial

Neurosurg. Quart. 1998, 8, 1: 42-47

- Kinnaste kandmine Pärsia Impeeriumist
- Antiik-Kreekas aiatööl,
- Aastail 800-900 Saksamaal
- Kirurgid: “*gentleman’s hands are clean*”
- Üle 100 a. tagasi autopsial, operatsioonil kujutletamatu
- Siiski: sajandi lõpul USA-s ja Euroopas sporaadiliselt

- **Ernst von Bergmann:** valged kitlid, käte pesemine enne operatsiooni
- **Werner Zoega von Manteuffel** jätkas v. Bergmanni ranget režiimi
 - Dr. Woldemar Fick: furunkel kael
 - Zoega korraldus keeta paar autopsiakindaid ja kanda assisteerimisel
 - “Gummihandschuhe in der chirurgischen Praxis”*
 - Centralblatt für Chirurgie, Mai 1897

Ernst von Bergmann - Baltic pioneer cranial surgeon

Emirates Med. J. 1997, 15, 1: 38-43

Sündis 1836 Riias

Dr.med. Tartus 1863 “*Zur Lehre von der Fettembolie*”

1866 Preisi-Austria sõjas, seejärel Prantsusmaa-Preisi

sõjas → tüsistused

Tartu aastad - aseptika, haavaravi

Listeri printsiibid → letaalsuse ↓

“*What’s new in surgery?*”

“*Today we wash our hands before surgery*”

Peaaju traumad

1873 “*Lehre von der Kopfverletzungen*”, Stuttgart

1880 laiendatud 560 lk. käsiraamat “*Die Lehre von der Kopfverletzungen*”. Stuttgart, Enke

Normaalne ja kõrgenenud IKR probleemid (100 lk.)

IKR ↑ → vereringe ja hingamine

Massiekspansioon - hematoom

tuumor

abstsess

Ei tundnud luu vahatamist (Victor Horsley)

Soovitas luupulbrit diploesse hõõruda

1882 kirurgiaprofessor Berliinis

1889 “*Die chirurgische Behandlung von Hirnkrankheiten*”

Põhimõtted, mida Cushing, Horsley jt. formuleerisid
ingliskeelses maailmas aastaid hiljem.

TÄNAN TÄHELEPANU EEST!