

**ZRÍNYI MIKLÓS NATIONAL DEFENCE UNIVERSITY
KOSSUTH LAJOS MILITARY SCIENCE FACULTY
MILITARY DOCTORAL SCHOOL**

Dr. Révai Tamás

**THE EFFECTS OF LACK OF SUPPLY ON THE DEVELOPMENT OF THE
FUNCTIONAL KIDNEY DISEASES IN THE HUNGARIAN ROYAL ARMY
1941-1945.**

title doctoral (PhD) the author's review of his treatise

Scientific consultant:

Prof. Dr. Szabó Miklós

academician

I. SUMMARY AND OBJECTIVES OF THE RESEARCH TASK

On the beginning of my nephrologic specialist function the exterior reasons of the functional renal failure, and I was watching the contexts of the contacts between the predisposing factors. In the course of the watch correlations the exterior temperature fluctuations were demonstrable, the degree of the cold impacts, his duration and renal failure with a given type between cases. To the statistical definition of this I was looking for a numerous sample; was obvious to me to analyse the multitudinous sicknesses of the Hungarian Royal Army I. - and particularly the II. World War battlefield with a retrospective method.

I may have extended the examination of the reasons of the functional renal failure over cases on all that in a correlation with the wartime circumstances, that on his row the organism big water- and it may have had

sodium losses and the blood may have thickened staining at this profúz diarrhoeas, dysenteric infections, vomit with big mass, bigger gastric- and intestine bleedings follower dessiccation caused by low blood volume on his case, or after big operations.

World War I from among not known battlefield mass illnesses the [febris wolhynica](#), the [tibiaalgia](#) beside infections belonging to his circle the [typhus exanthematicus](#) his diagnosis, I haunt his therapy with emphasized attention since they are these illnesses, they proved to be multitudinous on one repeated in World War II.

I studied it with marked attention likewise World War I battlefield kidney diseases.

Szignifikánsan demonstrable it being cold traceable sicknesses, inside this the oedema, hematuria, but particularly the registration of the two bands. The oedema, than a primary symptom led to the recognition of the illnesses the mostly, getting sick near 80 percent [nephritis diffusa](#) established the chronic and [subacut](#) in a phase close in an identical distribution. The analysis of World War II sicknesses the renal failure and the [nephrosis](#) for his development and I extended it based on his correlation between the weakness taking shape as a result of the supply deficiencies the onto the incidence of epidemics occurring in the course of the World War II. I tried my inferences the conclusions were drawn from the results of the examinations onto the Hungarian Royal Army with analyses with a similar character done by others but I did not find data concerning this neither the Hungarian, neither it foreign language in literature.

The XX. the priorities of the armed forces' tasks were changed to a century's 90 years significant. Beside the area protection the emphasis onto the fight against the terrorism, onto

the prevention of the ethnic conflicts, onto peace creation, onto peace-keeping, or onto the prevention of the catastrophe situation, was put onto his treatment

Being integrated into NATO modified Hungarian Army duty system, some components of the safety got into a new dimension, particularly duty system with an international level deriving from the global strategy. All these Hungarian Army takes a part in increasingly more international missions.

The Hungarian Army's present and his future military expeditions from time to time on an extreme temperature and they are going on in environment, the staff accomplishes a service on distant areas often and their problems have to be solved between circumstances to which accustomed is not got for them. The experiences of the military history prove that they are the multitudinous sicknesses mostly on strange areas unambiguous, they occur among extreme circumstances. All these with his respect in my treatise although fundamental inside the period between 1941-1945 the effect of the supply deficiencies and the contexts between the kidney diseases I examine— drew the conclusions from the examinations in connection with the tasks of the military missions extrapolate

II. THE HYPOTHESES' OF THE RESEARCH AND MAIN OBJECTIVES

I formulated the next hypotheses according to this:

1. Doctor public health service's structure of the Hungarian Royal Army and his institutional system were equal to the requirements made on him in peacetime
2. The Hungarian Royal Army field hygienic supply in the course of—deficiencies of the general material supply manoeuvres against Soviet Union it medical a hygienic service was able to solve it partly simply.
3. The supply deficiencies of the 2. Hungarian army and the Soviet Union extreme weather multitudinous sicknesses, epidemics, which he managed to localize partly simply on the manoeuvre area, were brought about.
4. From 1942 autumn the 2. Hungarian army the supply deficiencies and these his consequence the starvation, the general physical weakness, the liquid deficiency and the extreme meteorological circumstances, and the functional kidney diseases (nephrosis, nephritis renal failure caused by) a context was needed be.

Set it as an aim in my treatise, that:

1. I justify it through the function of a hygienic service's organism of the Hungarian Royal Army between 1920-1945 for the deficiencies of the military medical care and contexts between functional kidney diseases.
2. I reveal it and I examine it a hygienic service's function of the Hungarian Royal Army.
3. I shed light on the Hungarian Royal Army organism and his institutional system, and I analyse the military political events being attached to the period negotiated about directly.
4. I reveal the therapeutic procedures of the kidney diseases between 1920-1945.
5. I shed light on the differences between the therapy of kidney disease patients' treatment between 1920-1945 and our days.

III. RESEARCH METHODS

The research aims I applied the next research methods in the interest of his realisation:

1. I studied the archival substances which are connected to the topic, monographs, studies, and the literature concerning his parts. These his processing, his systematisation, I used the adaption as a fundamental method in the case of the applied researches furthermore.
2. I systematized my knowledge got in the course of my practice, tapasztalataimat- these on his row the taxonomy grouping, I applied it concerning the procedures of a summary.
3. The multitudinous and the grouping of epidemic sicknesses, I made the clinical picture analyses with the methods of the induction and an inference inside this.
4. The comparative analysis of the illness types I applied the methodology of the analysis and a synthesis.
5. I continued vocational consultations in the topic expert Hungarian and with foreign country specialists.

The construction of the treatise**I. chapter**

The presentation of the Hungarian Royal Hungarian soldier chef's hygienic service, inside this Hungary's military public health 1869- between 1918. Apart from this the presentation of the Hungarian Royal Army's doctor public health service and his institutional system 1918 and between 1945.

II. chapter

The XX. century wartime mass illnesses and epidemics, with a strange look The presentation of specific features of soldier medical care of World War I, and of the battlefield patient field observatories

III. chapter

The presentation of the supply deficiencies and the functional kidney diseases, and the presentation of Hungarian Royal Army's military taking a role in World War II. The description of the therapy of the kidney diseases 1920 and between 1945, and the battlefield kidney diseases, the presentation of case reviews. The battlefield stress, the overview of the predisposing factors of the functional kidney diseases, and the draughting of the features of hungarian medical care in World War II.

V. THE SUMMARY OF THE RESEARCH WORK

The Hungarian Royal Army became unknown past in many looks after all. Finished past army set up in the sense that he is it with a 1867 law organic in 1945 came to an end. This fact yet if the legal successor is the Hungarian people's army and the predecessor continuity between an organism on several areas can be found

The unknown attribute indicates that there are more areas like that in the Hungarian Rpyal Army actually, that his research not, you are in a not being needed measure occurred. A story spanning the doctor public health service's one hundred and forty years according to my judgement is like this. I confronted it in the course of my researches, that it by way of me examined and particularly hygienic documentations concerning the frequented period onto daughter-in-law one incomplete (compared to that of particularly ones dealing with the manoeuvres).

This yet then thought-provoking, if we take into consideration that he is it I-and the II. a world war meant military defeat, on the row of which it is I. in a world war, to the army equally the field hygienic institutions nearly 50, the II. in a world war though more than 80%-os you suffer loss.

1. Researching me in more concerns for one of source value can be considered, mainly if I take the examination of the doctor story library's and the single hospitals' archival substances into consideration beside this. With the foreign country researchers' collaboration, ill. substances received on his ferry confirmed my research results from time to time, somebody else their data differing mutual in cases onto additional researches motivated.

2. In the examination of the topic (and in my treatise) the system I considered a principle definitive. The happenings of lecturing in I. chapter for the Hungarian Royal Army hygienic service between 1867-1945, inside this I. I examined the structure of world war supply. The army's medical care in peacetime in the constant hygienic institutions (in a military hospital, in military hospitals, in infirmary houses) happened. Mobilisation the supply proceeding about the field hygienic institutions the field hospitals, infirmary houses, patient-lying stations, contagious hospitals, patient field observatories made it.

Onto the erection of the patient field observatories 1914-1915-ben that northern row avoided because of epidemics occurring on a theatre of war. They were special field hospitals in contagious hospitals' truth on the expressed one. The institutions' fundamental task was the prevention of the epidemics occurring on the battlefield dragging onto underlying areas.

3. Serious difficulties were caused by the epidemics in World War I and II in the Hungarian Royal Army.

I. the period of the position war between 1915-1917 did not know infections till then in a world war the trench foot, [nephritis](#) and the trench fever, the [febris wolhynica](#) reported it. Serious [paratyphus](#) and [typhus exanthematicus](#) beside sicknesses the standing war, the transportation problems, the epidemics occurring simultaneously, the drinking water with a diverse bacterium truth mixed infections occurred as a result of his contamination ([typhus abdominalis](#), [paratyphus](#) A, B, [dysentheria](#), cholera, [febris wolhynica](#), [variola](#) vera).

4. In World War I the age of sick largely was of 25 years, and in the World War II. the nephropathy appeared in the ages between the 30-40. years rather. A feature was other the illnesses one before a referral his existence in World War I at the patients 70 % percent 5- 8. of his months, at 10 % percent 2-4. of his months, at 12 percent they were the patients existing early at this existence. The same indicators were shortened significant in the World War II, fundamental onto 2-4 months, ill. onto 2-3 months can be leaded back.

5. Between Hungarian Royal Army soldiers the yes unsettled, often cold weather, the food-, and egészségügyi- and deficiencies of equipment, and the intense physical and grew up in a big degree because of a spiritual strain the infectious and the number of the kidney diseases.

6. The nephritis appearing often, and the intense oedema coming forward with this relatedly, the soldiers being crowded, the inapposite hygienic relations, the washing opportunities, the deficiency of the suitable food, the most unsettled weather, and the multitudinous louse *Rickettsia prowazekii* on his endemic area, [nephrosis](#) syndrome (NS) onto his incidence gives to deduce between the Hungarian Royal Army's soldiers.

7. Turned in my whacking mouth based on the data beside the malarial cases the so-called „kiütéses hagymáz”, the typhus exanthematicus. In the background of the fast spreading of the typhus epidemic the soldiers' crowded accommodation, and as a result of the unsatisfying hygienic relations arising intense and extensive being infested with lice acts

8. The acute ceasing of the vital functions of the kidney – besides of the endogenous intoxication of the organism– the salt water household, the acid base brought about the disturbance of the endocrine functions of balance and the kidney. Between the Hungarian Royal Army's soldiers primary the acute renal failure prerenal or his functional form, the reason of which he is, appeared the hypoperfusion of glomeruli which led to the decrease of GFR (glomerular filtration rate).

The meanings and the soldiers' personal report mention it the drinking water the deficiency of supply and the difficulties of his acquisition. At the soldiers the insufficient liquid input you are the increased loss the higher up mentioned volumen -preserving mechanisms activated and dehydration concurrent liquid loss may have taken shape on his case simply, because of this proposed the regular drinking water the insurance of a supply.

V. SUMMARISED INFERENCES

To the examination of the selected topic my worded hypotheses won the basis of the done examinations and analyses according to the successors in the course of my researches:

1. The ideas concerning the Hungarian Royal Army field medical care were taking shape on the front of the 1920 years already. The medical care being equal to the military strategy of the blitzkrieg, onto the organizational forming of this, measures indicating the realization of his realisation well traceable.

Although the World War II. the battalion was a dressing station on world war battlefronts the place of the first medical supply, but in the war against Soviet Union onto the effect of the theatre of war events the application of the injured collecting stations appears as a new feature. I. the system of world war medical care somebody else changed in a concern. Here can be enumerated the modern idea of the tasks of the hygienic column and the ambulance column, and the centralization of their activities.

The activity of the field public health met the requirements fundamental, but it health and to the ambulance column they were not regular motor vehicles suitable to Russia meteorological and to his road conditions. The 1941 lodging group became unambiguous in the course of his

manoeuvres already, that the ambulant of the motor vehicles happening on ground low-level.

2. Slowed down on the 1942 autumns of the Hungarian advance and the 2. Hungarian army stopped at Don.

The German high command left a defensive line being equal to 27 thousand to the 2. army, but there were only 18 thousand for this task. The 18 otherwise strongly loss-yielding and fought a thousand had to settle down in the defender lane of the 27 regiments 1943 of his Januaries.

In 1942 of his Decembers in the 2. army the weapon, ammunition, the deficiency of clothing and food put on catastrophic sizes. The condition of the teams fighting ahead decreased largely especially.

His energies the final ones wore out, for the crew simply daily five-six clockmaker relaxation was left, eighteen-nineteen clockmaker after a field service. The temperature at January 12 unexpected -onto 25°C decreased when at Uriv the Soviet teams began. Although from the technical viewpoint not over strong defence lines the offensive teams broke through it easily, the Hungarian defenders held their ground unarmed quasi; but the losses and the wounds it was with a measure like that that the hygienic service became impossible in the course of the withdrawal onto the supply of his tasks.

In the course of the withdrawal the more than 500 km-es pawn procession very many people did not endure it, their majority suffered frost killing. Based on the newest researches 1943. January 204334 heads were the staff numbers of the 2. army on 1, then ápr.on 6 this number onto 108319 heads reduced. 127 000-128 000 heads were the wounded and dead persons' numbers, 50 000 heads fell away according to the statements from this, 50 000 were wounded, 27-28 000 heads got into captivity! Somebody else 85 549 heads disappeared according to statements (this the died on duty and into the captivity the number of fallen ones).

3. The epidemics, ill. the multitudinous sicknesses applied for the front following arriving out already at the 2. army sporadical. Practically the army's full staff gone through the „ukranka.” It being infested with lice and the itch became obvious in the September period already, but for this handling him in this period yet solved was.

A winter began on his age, the malnutrition, the inapposite winter clothing and the hopelessness encroaching the number of sicknesses took shape at Uriv increased by leaps and bounds in a period following a breakthrough.

The army's redeployment under short time, the congestion of the assembling barracks and its placement-, because of the insufficiency of supply circumstances the sporadic epidemics,

sicknesses became multitudinous. The doctor public health service's leaving behind their substances and the field institutions' single part was unable to supply his curative activity satisfactory already.

I proved that he is the battlefield stress apart from the predisposing factors defined in the functional kidney disease occurring in the hypothesis and the inapposite clothing take played a considerable role.

The inferences the conclusions were drawn from the done examinations, the sicknesses which can be granted numerical and the number of mortalities (his proportion) pointed only onto the registered cases it was possible to do it; at worst based on the done calculations to interpolate it may be him that the 2. Army is unregistered, but died, (lost), was captured, died in Hungarian soldiers' proportion there what may have been.

VI. New scientific results

The result of my research work a paper was ready, I regard the undermentioned scientific results

as certified based on his inferences summed up for it furthermore:

I formulated it, making use of my personal experiences the supply deficiencies and the context

between the functional kidney diseases.

1. I proved myself based on my researches the battlefield mass illnesses and epidemics and the functional kidney correlations between sicknesses, inside this HFRS-el in a context comparing I defined it the Balcan nephritis, the nephrosonephritis haemorrhagica infections – furthermore the contemporary wartime nephritis and the nephropathy epidemica.
2. I defined it based on my examinations I. onto the period of a world war relevant and the therapy of the kidney disease patients of our days, I digested the chronology of the researches concerning the physiology of the kidneys in connection with this.
3. 3. I defined the incidence rate of the functional kidney diseases in the Hungarian Royal Army period between 1941-1945, the morbidity types, and the number of the mortalities.

4. I defined the predisposing components of the functional kidney diseases in the Hungarian Royal Army period between 1941-1945 based on my researches.
5. I shed light on it, that apart from the predisposing factors defined in the functional kidney disease occurring in the hypothesis the battlefield stress and also the inapposite clothing too played a considerable role.

VII. RECOMMENDATIONS:

The treatise the interdisciplinary processing of a topic with an army story object, which is the army story and the soldier public health, medical history, infectological and nephrological on areas (in disciplines) the results of done researches, implies the conclusions deducted from them.

From the interdisciplinary character adódóak the research results of the dissertation, my judgement drew the conclusions from the examinations (my hopes) the successor may utilize it according to the actual aims of a disjoint area of science:

1. The source of the army story researches
2. On ZMNE continued on all of them level and form in his training to the topic subjects being attached to the army story primary viewforming his literature.
3. The medical science story –from within it infectology and the nephrology– the additional substance of knowledge.
4. The Hungarian Army (MH) hygienic service designer -, in his organizing work, particularly in preparing him for the staff's foreign country missions and in his financial and technical insurance criterion.

VIII. REGISTER OF MY PUBLICATIONS CONNECTED TO THE TOPIC

I. JOURNAL COMMUNICATIONS

1. Révai Tamás, Kaszás I, Márton C, Arpási G, Winkler G.: Nephrotic syndrome with focal segmental glomerulosclerosis after an insect bite. Clin Nephrol. 2006 aug.; 66 (2): 128-30.

2. Révai Tamás: Starvation and [undernutrition results war edema](#). The Ohio Journal of Science (accepted for publication).
3. Révai Tamás, Horvath Csaba: Dietary Considerations For Soldiers Exposed To Heat. The Internet Journal of Rescue and Disaster Medicine. 2007. Volume 7 Number 1. (<http://www.ispub.com/ostia/index.php?xmlFilePath=journals/ijrdm/vol7n1/diet.xml>)
4. Révai Tamás: Famine and [war](#). West Indian Medical Journal. 2008. 57 (1): 74.
5. Révai Tamás: Famine and [infection](#) in [war-time](#) Pakistan Nutrition Journal 6 (5) 6-517, 2007.
6. Révai Tamás: Emergency Rations For Expeditions In Different Climates. The Internet Journal of Rescue and Disaster Medicine. 2007. Volume 6 Number 2. (<http://www.ispub.com/ostia/index.php?xmlFilePath=journals/ijrdm/vol6n2/rations.xml>)
7. Révai Tamás: Lack of [food supply](#) and [health provision](#) and [kidney diseases among](#) the [soldiers](#) of the Royal Hungarian Army in 1942-43. Pakistan Journal of Nutrition 2007. 6 (6). 718-721.
8. Révai Tamás –Somos Éva: The pathogenesis of the nephrotic oedema and his therapy Medicus Universalis 1999: XXXII/ 635- 636
9. Révai Tamás: The clinical significance and the role of proteinuria in the progression of the kidney disease. Praxis, 2000. 8. 54-56.
10. Révai Tamás– Molnár Tibor: Tendril diuretic and tiazid- derivative getting him in renal failure. Practice 1999: 8. 11. 63-64
11. Révai Tamás– Magyar Tamás: The incidence of the infectious complications in nephrotic syndrome. Praxis, 2000.3.1.15-17.
12. Révai Tamás –Harmos Géza: Simvastatin [treatment](#) of [nephrotic syndrome due](#) to [bee stings](#). Journal of Royal Society of Medicine 1999: 92: 23-24.
13. Révai Tamás –Somos Éva: Nephrotic syndrome- in catchwords. Praxis, 2001. 0 évf.10. 28- 29. 14. Révai Tamás: Nephrosis syndrome. Praxis, 2000. 9 évf.10. 77-80.
15. Révai Tamás –Benedek Szabolcs– Winkler Gábor: Proteinuria and [anticardiolipin](#) antibody with positiveness – on the single special hook of thoughts. Hungarian Belorvosi Archívum 2003. 56. 93-95.
16. Révai Tamás –Harmos Géza: The [rifampicin](#) and the acute renal failure Medicina Thoracalis. 1998. 551: 243-244/18.

17. Révai Tamás –Pál Borbála –Magyar Tamás –Winkler Gábor: Non-oliguric acut renal failure urosepsis caused by multi-organ failure his part phenomenon in a diabetes patient Hypertonia-Nephrologia 1999: 3: (4) 208- 210.

18. Révai Tamás: The urine road infection diagnostic and his therapeutic opportunities in the family doctor practice. The Hungarian Primary care Archive. 2000. III évf. 3. number 75-79.

19. Révai Tamás: Angiotensin receptor applying obstructive ones in kidney diseases and diabetic nephropathy. Medicus Anonymus 2003/2. XI évf. II. number 35-37.

20. Révai Tamás: About nephrotic syndrome. The Hungarian Primary care Archive. V. 4. 197-200. 2003.

II. LECTURES

1. Révai Tamás: The effect of calcium-channel blocking implements belonging to the different group blokkolószerek his effect the diabetic nephropathy onto his progression the role of the hindering of L channels IV. Pécs. Diabetic nephropathy Day. 1999.

2. Révai Tamás: Nephrosis the service opportunities of a syndrome family doctor training series (1998)

3. Révai Tamás: Proteinuria, nephrotic syndrome. St. John Hospital Scientifical Lecture, 1999.

4. Révai Tamás: The nephrotic syndrome lecture for medical students (V. class), 2004.

5. Révai Tamás: HIV and the nephrotic syndrome. Classroom lecture doctors, residents, for medical students, St. János Kórház, 2002.

6. Révai Tamás: The steroid- therapy his significance in patients suffering from nephrotic syndrome Classroom lecture doctors, medical students. for him St. János Kh, 1998.

7. Révai Tamás: The nephrotic syndrome. University classroom lecture for medical students (V. class) Well valley Klinikai Tömb, 2006.

8. Révai Tamás: Nephrosis syndrome. Springer Scientifical Publisher Kiadó. Budapest, 2003.

9. Révai Tamás, Máthé Cs, Bártfai Z: Ciszplatin- nephropathy. Medition Publisher Kft, Budapest, 2005.

IV. BOOK CHAPTERS

1. Révai Tamás: Nephrotic syndrome [in: Kakuk Gy. (editor): Clinical nephrology. Medicina Publisher Rt. Budapest, 2004]: IV/6 127-138, 2004.
2. Révai Tamás: Kidney diseases. Nephrotic syndrome. [in: Dr. Csalay László (editor): Family doctors' handbook. Anonymus, Budakeszi, 2003.]: 382-384.

V. ASKED REVIEW 1. Révai Tamás: Asked Review: [R L Atenstaedt: The medical response to trench nephritis in World War One. Kidney International (2006) 70, 635-640.]

PROFESSIONAL SCIENTIFIC BIOGRAPHY

Name, natal time: Dr. Révai Tamás, 1962. X. 13.

Qualification, skill:

Semmelweis Medical Science University, Budapest
2003. internist special examination

1997. nephrologist special examination

Vocational arrangements:

1988. Ujpest Hospital

1994. SZT László Hospital

1997- SZT John Hospital

2003. senior lecturer appointment

2006. head physician's appointment

Present workplace:

SZT. John Hospital Department of Internal Disease- Outpatient Department of Nephrology
2006. national defence ministerial honour

Association membership:

Army and Society Organisation

Hungarian Nephrology Society

I am the member of more organisms where I give lectures regularly.

Language knowledge:

Secondary, C expanded by a vocational substance type state language exam English,
elementary level Russian language exam, German negotiation, French conversational level.
Educational-, publicational -, the presentation of a scientific activity: medical student
education, onto an invitation appeared in scientific journals communications recensions,
proofreading tasks, family doctor's professional development.