# Original article:

# The attempt of graphodiagnostics of health state of the last hetman of Ukraine Kyrylo Rozumovskyi using samples of his handwriting

Degtyarev Sergey<sup>1</sup>, Loboda Andrii<sup>2</sup>

# **Abstract:**

Background: The article makes an attempt to define health state and probable illnesses of the last hetman of Ukraine Kyrylo Rozumovskyi in the last years of his life. Methods: The study is based on using and analyzing of the memoirs and biography books, containing records and detailed description of health state of K. Rozumovskyi, and documentary archive materials with the samples of his handwriting. To analyze the handwriting of K. Rozumovskyi, the special graphological test developed by Polish physicians of National Health Institute in cooperation with psychologists and graphologists was used. Results: According to the authors' conclusions, K. Rozumovskyi suffered from diabetes mellitus, gout, and ischemic heart disease. He was vulnerable to common cold also. It is assumed that these diseases contributed to the myocardial infarction which caused his death in 1803. Conclusion: Considering the lack of the system of professional medicine in XVII, XVIII, early XIX century, using graphological method for determining the health of well-known people of these times, is effective.

**Keywords:** Kyrylo Rozumovskyi; graphological method; disease; hetman of Ukraine.

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#### Introduction

The historic past is directly intertwined with human activity. In what way a person could influence the course and character of events and processes? The historical and biographical studies allow answering this question. They reconstruct the life of this or that person, reproducing and specifying different circumstances that could influence his deeds, ideas etc. The scientists refer to such circumstances social and economic, social and political circumstances in which a person was born and was developing, education, nationality, surrounding (family, professional and so on) and etc. Taking into consideration the above mentioned factors, the life and professional life of great quantity of the figures of past such as artists, politicians, scientists, military men were studied. The great variety of biographical literature is already devoted to some of them. But the decisions and direct actions were often influenced by their health state. Unfortunately, this factor is rarely taken into consideration by the scientists during biographical studies. The exception to some extent is the studies devoted to the figures of the middle XIX–XX century. Exactly this period is marked by the rapid growth of professional medicine and the objective (or relatively objective) information as to state of a person in case of an illness was fixed in the correspondent medical conclusions, which are kept till nowadays. For example, a lot is known about illnesses of famous Ukrainian poets Taras Shevchenko and Lesya Ukrainka; the biographical literature describes in detail health state of the famous Russian writer Anton Chekhov and many other national and foreign figures.

# Purpose of the paper

The article makes an attempt to define health state and probable illnesses of the last hetman of Ukraine, later count and field marshal of Russian empire Kyrylo Rozumovskyi (1728-1803) in the last years of his life.

# **Material and methods**

The study is based on using and analyzing of the following sources:

- 1. Degtyarev Sergey, Dr. Sc. (History), Prof. Sumy State University, 2, Rymskogo-Korsakova st., 40007 Sumy, Ukraine, email:starsergo@bigmir.net
- 2. Loboda Andrii, MD, Prof. Sumy State University, 2, Rymskogo-Korsakova st., 40007 Sumy, Ukraine.

<u>Correspondence to:</u> Loboda Andrii, MD, Prof. Sumy State University, 2, Rymskogo-Korsakova st., 40007 Sumy, Ukraine, email: <u>fafik1313@gmail.com</u>

- memoirs and biography books, containing records and detailed description of health state of K. Rozumovskyi during the last years of his life. The first and third volumes of four volume biographical study by Aleksandr Vasil'chikov "The Family of Rozumovskyi" contain the most of such information; - documentary materials, kept in Sumy Region State Archives, which are devoted to the partition of property of K. Rozumovskyi among his relatives and to the revealing of his burial ground in 1927. The documents as to the partition of property were drawn up during the last years of last hetman's life. They contain the samples of his handwriting, analyzing which we could obtain new results as to defining the health state of K. Rozumovskyi.

To analyze the handwriting of K. Rozumovskyi, the special test developed by Polish physicians of National Health Institute in cooperation with psychologists and graphologists was used (http://cardio-life.ru/kalkulyatory-zdorovya/po-pocherku).

**Ethical clearance:** This research work was approved by the ethics committee of Sumy State University, Ukraine.

# **Results and Discussion**

K. Rozumovskyi started spending more time in Baturyn after the death of his wife in 1771. It is unknown when the health state of Kyrylo Rozumovskyi started to worsened. But in 1791 he had been already sick. The wife of his son Andriy visited him in Baturyn at that time.

The count P. Zavadovskyi wrote in his letter dated 30th June 1795: "His look overwhelmed me to tears: supported under his arm, his head bowed to the ground, dried-up man; only his spirit did not lose its pleasant gaiety...". The next year one of the outstanding figures of Yekaterina's epoch, the count J. J. Sievers wrote in 1796: "My pleasure to see him was strongly darkened by his miserable health state. He had wounds on his feet, which exhausted him. The doctors thought them to be incurable, but due to the simple remedy of one peasant, he got rid of them ..."<sup>2</sup>.

Andriy Rozumovskyi wrote himself to his wife from Baturyn in 1800: "I assure you that he looks more vigorous, than when you left him (in 1791). He dines at the table with the rest, he eats heartily, sometimes even too much and it seems that it does not injure him, but he does not walk already"<sup>2</sup>.

The above mentioned facts signify that Kyrylo Rozumovskyi suffered from diabetes mellitus, clinical implications of which is formation of trophic ulcers on the lower extremities, which are difficult

to heal. The limosis of knyaz testifies in favour of diabetes mellitus. In case of diabetes glucose is not capable to penetrate a cell membrane and take part in metabolic process. As a result, the receptors are stimulated, which cause the feeling of hunger, but food consumption cause the rise of glucose level in the blood (hyperglycemia), which cause the decompensation of the illness and the clinical manifestation of which is faint and weight loss.

It is known that in 1800 there were an English doctor, whose name was Hunt, who had been living in Rozumovskyi's house since 1796 and a German doctor, Court Counsellor Dussek, who had hold a contract for 15 years (Vasil'chikov says that he was a Czech on the another page of his paper)<sup>2</sup>.

In 1800 during the temporary exile to Baturyn (the reason was pro-Austrian orientation and displeasure of Pavel I by that fact), Andriy Rozumovskyi spent a lot of time with his sick father. The Actual Councillor of State Nikolyev, sent to spy on A. Rozumovskyi, wrote in his dispatch that he "comes to his father at 12 o'clock and stays with him till 16...". On 16<sup>th</sup> February 1800 he wrote in his report to the general-prosecutor P. Obolyaninov that he was a witness of the fact that count Kyrylo Rozumovskyi could not walk – he was transported in a wheelchair and "there is a big knob on the left hand on the joint that is why he poorly manipulates his hand"<sup>2</sup>.

The above mentioned information can prove one more health problem in knyaz, which is gout which manifests itself due to formation of nodes (chalkstones) near upper and lower extremities joints. Chalk-stones are composed of urates, which are the salts of uric acid deposited in soft tissue near the joints as a result of purine nucleotides metabolic disorder, which is often of hereditary nature.

In 1800 Andriy Rozumovskyi wrote about health state of his father in the letter to his wife from Baturyn: "He moves from the bedroom to the livingroom with difficulty and quietly with one arm on the crutch and the other on his valet. Though, I am sure that the main difficulty comes from the lack of muscle exercise. It is seen that after some steps it is not so difficult for him to walk. When the spring comes his legs are improving. All the surrounding people say that it happens every spring. Moreover his legs are tightly bandaged, which surely provokes numbness. His arms are also bandaged. Bad body fluids rushed to the extremities and, thank God, it released his chest and he did not suffer from short breath for a long time...". A. Rozumovskyi also wrote to his wife that hetman's legs are bandaged after 10 in the morning, and then he was dressed and later transported to the living-room<sup>2</sup>. Generally, the son of Kyrylo Rozumovskyi was optimistic he even noted that "I even do not think that the poor father is in so bad condition: on the contrary, I am sure that he is able to live some more years, the doctor also agrees with my opinion…"<sup>2</sup>.

Andriy Rozumovskyi wrote in his letter dated 10<sup>th</sup> March 1800 that the count cannot move his own legs, he is often short of breath and it is difficult for him to move and even sit. Though the doctor evaluated the health state of Rozumovskyi senior as satisfactory and he could not even lengthen his life, but even improve his health if he agreed to go abroad for mineral water treatment<sup>2</sup>. A bit later K. Rozumovskyi probably had caught a cold because his son wrote the next month (16<sup>th</sup> April): "The father's cold is over, thank God, I fear bad weather and the present week of fast. To tell the truth, all the precautions had been taken. He ate absolutely nothing the first days, not for the sake of fast, but for the sake of precautions. He coughs a lot and the cough is really terrible"<sup>2</sup>.

Kyrylo Rozumovskyi was not the best patient. He was constantly nervous; he often scolded the doctor, because he could not relieve him from pain in the legs. Despite the doctor's warnings, the patient asked the quack doctors for advice. In fact, A. Rozumovskyi recollected that "everything that was prescribed by the quack doctors was controlled by the doctors; they do not allow any internal remedy"<sup>2</sup>.

A. Rozumovskyi's disgrace was over in December 1800. After that he left Baturyn and was in Petersburg in early January 1801<sup>3</sup>. He was appointed a senator on the 10<sup>th</sup> of December 1800. Having left for Petersburg, he corresponded with his father from Petersburg.

From medical point of view, the presence of extremities oedema in combination with short breath is a sign of cardiac insufficiency, the most common reason of which in declining years is ischemic heart disease. Metabolic disorder as a result of diabetes mellitus can worsen clinical course of ischemic heart disease and cause cardiac infarction. It is thought that cardiac infarction was the reason of K. Rozumovskyi death at the age of 74.

Before his return to Vienna in 1802, Andriy Rozumovskyi visited Baturyn again. He found his father in miserable condition. The diseases of the former hetman exacerbated. The son persuaded the father to go abroad for treatment as the doctors advised. A. Rozumovskyi even ordered a carriage of special design for the father (for the abroad

travel for medicine water treatment). The back part of the carriage settled back with the help of special mechanism in order to put in the bed. But K.Rozumovskyi's health state worsened quickly and he could not make a journey<sup>3</sup>.

Then Andriy Rozumovskyi sent the father bandages ordered by the doctor Dussek in Vienna. The famous doctor Frank watched them produced. Unfortunately, the bandages turned out to be not qualitative.

The doctor Dussek died soon and Andryi Rozumovskyi recommended the father some other doctors, the dean of medical faculty in Lyon Claude Baleau in particular. K. Rozumovskyi had chosen him. But Baleau did not speak German that is why he could not acquaint with the disease records of K. Rozumovskyi, made by Dussek<sup>2</sup>.

Certain information as to the health state is provided by the documents containing the handwriting samples of Kyrylo Rozumovskyi. We have found the materials in Sumy Region State Archives, Ukraine<sup>4</sup>. They concern the conveyance of property by the former hetman to his children and nephews in 1800-1801. Some of the documents contain his instructions and autographs. The famous Ukrainian historian Oleksandr Lasarevskyi probably knew about these documents and also about hetman's diseases. Describing the process of property transfer to the children by hetman, he noted that Rozumovskyi "signed by trembling hand" the documents<sup>5</sup>.

In fact at that time Kyrylo Rozumovskyi almost could not write and signed his letters with difficulty. He wrote in his letter dated 20<sup>th</sup> January 1801: "You can see my signature and understand how difficult for me to sign with my trembling hand... "<sup>2</sup>. The hetman wrote in his letter dated 8<sup>th</sup> February 1801 that his health remains unchanged.

The analyses of K.Rozumovskyi handwriting signifies the worsening of its quality during 1800. The handwriting at the beginning of the year (letter in May) is of composite style, some words are neatly written (especially at the beginning of letter signature) and some words at the end of the letter are written carelessly enough, the most of the letters are joined together. The pressure while writing is moderate with lowering the lines down and slight right slant. The letters are of average size and somewhat angular. The analyses result signifies that the owner of handwriting is a person with a stable psychic, who often has common colds and suffers from sleep disorder. Moreover, he is disposed to endocrine diseases (in this case - to diabetes mellitus) and myocardial infarction.

Thus, we can see practically total correspondence of analyses result with the above mentioned medical conclusion of count's health state made according to the archive data.

In November 1800 the most of the words are written carelessly and most of the letters are separate. This fact and weak pressure while writing and different letter size signify the lack of vital energy, worsening of health state. Cold autumn weather more often contributes to exacerbation of gout and also decreases the physical activity of patients, which worsens the clinical course of diabetes and ischemic heart disease. Kyrylo Rozumovskyi died on the 9th of January 1803 at the age of 74 in Baturyn and he was buried in the crypt-mausoleum of the Resurrection Church. His body was embalmed, which was a very rare thing, especially in province, which Chernihiv province considered to be at that time<sup>5</sup>.

K.Rozumovsky's crypt was opened in July 1927 with participation of employees of Konotop District Museum and local authorities. The examination of hetman's remains confirmed the fact of embalming: the skull was sawn up and it contained the remains of balsamic substance; the heart was in separate metal box. The measurements of K.Rozumovsky remains allowed estimation of his physical parameters: height – 175 cm, cannon-bone – 40,5 cm, thigh – 52 cm, skull volume – 54 cm, ulnar bone – 31 cm, humeral bone – 36 cm, bridge of nose – 3,2 cm, skull height from superciliary arches to hair – 6 cm<sup>6,7</sup>.

Thus, the last hetman of Ukraine was of medium build, who during last years of his life suffered from a number of diseases inherent to elderly people such as diabetes mellitus, ischemic heart disease and gout, decompensation of which caused the death of the outstanding person.

#### Conclusion

The analyses of handwriting samples of the outstanding historical person allowed to evaluate the health state of K.Rozumovsky during his last years and define medical problems, which influenced the quality of count's life at this period.

It is interesting that there is a clear correspondence between the presence of K.Rozumovsky's diseases, estimated according to the archive data, and estimated by handwriting samples, which allows using the graphological method in perspective for analyzing health state of famous historical persons even lacking archive information as to their pathologies.

#### **Appendix**

The authors declare that there is no conflict of interests regarding the publication of this paper.

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#### **Conflict of interest disclosure**

The authors have no conflict of interest to declare **Individual Contribution of the Authors:** 

Conceptual work: Loboda Andrii

Data collection: Degtyarev Sergey, Loboda Andrii

Manuscript writing: Loboda Andrii

Editing of final manuscript: Degtyarev Sergey,

Loboda Andrii

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