Goloschapova I.M., Nikonenko D.Y., Dolgov G.V., Savitsky A.G., Shelygin M.S., Kuznetsov S.V., Nezhentseva E.L.

The outstanding German obstetrician-gynecologist Professor Karl Josef Gauss

North-Western State Medical University named after I.I. Mechnikov

(Russia, Saint Petersburg)

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Abstract

The article presents biographical information about the outstanding German professor, obstetrician Carl Josef Gauss and information about his scientific heritage in obstetrics.

Keywords: Carl Josef Gauss, obstetrics, Gauss sign, Ivanov-Gauss cranio-cutaneous obstetric forceps.

Carl Joseph Gauss - the future outstanding German obstetrician, professor, was born on October 29, 1875, in the family of the farmer Carl August Gauss and his wife Anna Ebmeier, at the Lone estate near Isernhagen (Germany). His great-grandfather was the eminent mathematician Carl Friedrich Gauss [8].

C.J. Gauss studied medicine in many cities in Germany: Tübingen, Erlangen, Kiel, Würzburg and Munich, where he received his doctorate in 1898 at the age of 23. After completing military service in the early years of his career, C.J. Gauss worked as a ship's doctor. In 1909 he qualified as specialist in obstetrics in Freiburg, where he was appointed an adjunct professor in 1912 [5].

During the First World War, C.J. Gauss served on the western front and was awarded the Iron Cross II degree and the "Order of the Lion of Zeringer".

Since the beginning 1921 C.J. Gauss was in charge of the gynecological department at the Freiburg Hospital. He was a professor at the Albert Ludwig University of Freiburg. In 1923 C.J. Gauss was promoted to professor at the Julius Maximilian University in Würzburg, where he was director of the university gynecological clinic and obstetric school until 1945 [5].

Picture 1. Carl Josef Gauss (1875-1957)

C.J. Gauss made an outstanding contribution to the introduction of twilight sleep in obstetrics and in 1925, together with the Heidelberg pharmacologist Hermann Wieland (1885-1929), he

developed an anesthesia apparatus [4]. In addition to articles on radiation therapy in gynecology, C.J. Gauss published valuable information on gynecological urology and gonorrhea in women.

One of the most outstanding scientific achievements was the discovery of one of the symptoms of early diagnosis of pregnancy, which was subsequently named after him, the Gauss sign. Sign consists in slight displacement of the cervix in all directions, not transmitted to the uterine body [1,2]. This symptom is still indicated in guidelines around the world and is used in practice to diagnose pregnancy.

C.J. Gauss proposed his modification of Willett-Ivanov obstetric operation using crémalier forceps with deep corrugated plates at the ends of the jaws for grasping and firmly holding the folds of the fetal head skin (Ivanov-Gauss cranio-cutaneous obstetric forceps) [7]. This method is used for rapid delivery in cases of placenta previa, labor weakness, and endometritis. Also, Gauss used radiation therapy to treat malignant and benign neoplasms [8].

Picture 2. Gauss sign.

Together with Hermann Wieland, the anesthesia specialist Ernst von der Porten and Behrend Behrens, C.J. Gauss co-edited the specialized journal "Pain" (Der Schmerz), for which they were all awarded the Scroll of Recognition in 1928 by the American Anesthesia Society. The magazine "Pain" was published at the Stürtz printing house of the University of Würzburg and became the first German-language anesthesiology journal.

Soon after the National Socialists came to power on April 23, 1933, the scientist joined the NSDAP (National Socialist German Workers' Party) [8].

C.J. Gauss was a member of the national League for germanism abroad, which later merged with other areas and became known as Reichskolonial Foundation and the "Academy of Scientific Research and Maintenance of Germanism" in Munich [8].

In 1934, K.J. Gauss completed the construction of a new gynecological building near the Luitpold Hospital in the Grombühl district (Würzburg). C.J. Gauss was actively involved in the planning of the building. He was responsible for medical equipment and artistic design of the building. There were a lot of art objects in the building. Art furniture, paintings by artists, murals, sculptures - all this could be found in the wards, staircases, and corridors of the hospital. The names of the wards were not numbered, but were named after German cities that were taken away from Germany after the World War I. A bust of Hitler was installed at the entrance to the clinic. All of this definitely had a political significance, since C.J. Gauss tried to conform to the new time, orders and moods in the country. Later, this institution will be described as "the most modern gynecological clinic in Germany" [5, 8].

Picture 3. University Women's Clinic of Würzburg

At that time, ideas of racism aimed at encouraging high-quality offspring were already developing in full force in Germany, and defective offspring should be prevented or eliminated [5,6].

In this way, the “Law for the Prevention of Genetic diseases of Offspring” was adopted, based on which all people with genetic diseases could be compulsorily sterilized. Such mandatory sterilization was carried out in the gynecological clinic in Würzburg, which was managed by C.J. Gauss at that time [5,8]. Until 1945, 994 women of childbearing age (13-47) had been sterilized.

In one of C.J.Gauss's publications in 1935 about eugenic sterilization using radiation, he pointed out the advantages of this method over the surgical method of sterilization, since the first did not achieve such high mortality rates [8]. This judgment was heavily criticized, arguing that C.J.Gauss was “strongly dramatizes mortality rate from surgical sterilization”. However, by 1943 C.J.Gauss had about 13 publications on this topic.

During the bombing of Würzburg on March 16, 1945, the building of the gynecological clinic was destroyed along with the house of Carl Gauss [5]. After losing his home, C.J. Gauss was forced to find a temporary apartment in Zinklesweg. During the denazification, he fell into the category of "fellow travelers" or nominal Nazis and left Würzburg, moving to Bad Kissingen. There he continued to work from 1947 to 1955 as chief physician of the obstetrics and gynecology department at St. Elizabeth Hospital.

Carl Josef Gaus died on February 11, 1957 in Bad-Kissingen at the age of 82. His scientific achievements are in demand in modern obstetrics and gynecology.

1. Ailamazyan E.K. Obstetricians-gynecologists of St. Petersburg (science in faces) 1703-2003 / Ailamazyan E.K., Tsvelev Y.V. [and others] - SPb.: Publishing house of NL., 2003. - 154 p.
2. Obstetrics: textbook / E.K. Ailamazyan [and others]. - 10th ed., Rev. And add. - M.: GEOTAR-Media, 2019. - 768 p.
3. Obstetrics: textbook / ed. V.E. Radzinsky, A.M. Fuchs. - M.: GEOTAR-Media, 2016. - 1040 p.
4. Herbert Baar: On the development of anesthesiology at the University of Würzburg. In: Peter Baumgart (Ed.): Four hundred years of the University of Würzburg. Commemorative edition. Degener & Co. (Gerhard Gessner), Neustadt an der Aisch, 1982. - P. 951-956.
5. Karl Josef Gaus: From Freihaus to Women's Clinic. A short essay on the history of the women's clinic and obstetric school in Würzburg. In: Max Buchner (ed.): From the past of the University of Würzburg. Festschrift for the 350th anniversary of the University of Würzburg. Berlin, 1932. - P. 239-254.
6. Ute Felbor: Racial Biology and Heredity at the Faculty of Medicine, University of Würzburg 1937–1945. Königshausen & Neumann, Würzburg, 1995. - P. 67.
7. Encyclopedic Dictionary of Medical Terms. - M.: Soviet encyclopedia. - 1982-1984.
8. Carl Joseph Gauss [Electronic resource] - Access mode: https://deru.abcdef.wiki/wiki/Carl_Joseph_Gau%C3%9F