Belogolova A.D., Dolgov G.V., Sheyko A.D.
Outstanding German obstetrician, Johann Friedrich Ahlfeld

*North-Western State Medical University named after I.I. Mechnikov
(Russia, St.Peterburg)*

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Abstract

This article presents biographical information about Johann Friedrich Ahlfeld, german obstetrician, Universität of Leipzig professor, author of a manual of obstetrics, and an atlas of teratology, and a review of his scientific works and accomplishments.

Keywords: Johann Ahlfeld, Ahlfeld's sign, disinfection of the hands using alcohol, manual of obstetrics, teratology, postpartum fever.

Johann Friedrich Ahlfeld was born on October 16, 1843, in Alsleben, located in Saxony-Anhalt, in Germany. Being a very active and inquisitive child, Johann Ahlfeld showed interest in natural sciences from an early age – he quickly learned to count, easily mastered chemistry, was interested in biology and anatomy. Already at school, observing the inquisitive mind of the young J. Ahlfeld and the indomitable desire to learn new things, teachers and mentors predicted a career in medicine for him [1].

Picture 1. Johann Friedrich Ahlfeld (1843-1929)

And so it happened, in 1863, Johann Ahlfeld entered the University of Leipzig at the Faculty of Medicine. Karl Sigmund Franz Krede was one of the teachers of J.F. Ahlfeld. Later, K. Krede admitted, that Johann Ahlfeld was one of his most outstanding students.

In 1868, at the age of 25, J. F. Ahlfeld defended his dissertation at the University of Leipzig, "On rupture of the pubic symphysis during childbirth", while receiving a doctorate.

After defending his dissertation, Johann Friedrich Ahlfeld was actively engaged in obstetric practice at the University of Leipzig. Thanks to his observation, interest, and desire to improve the existing work standards, he formulated and introduced the wait-and-see principle of conducting the follow-up period into wide practice. J.F.Ahlfeld identified one of the vital visual signs of placenta separation. When the placenta is separated, the ligature applied to the umbilical cord is lowered.

Picture 2. Visual signs of placenta separation by J.F. Ahlfeld

This sign is significant and in demand in modern obstetrics, because it allows you to conduct the postpartum period as carefully as possible, reducing blood loss [3,6].

In 1873, at the age of 30, J.F. Ahlfeld defended his second dissertation for the degree of Doctor of Obstetrics and gynecology at the University of Leipzig, after which he continued to work there as a professor of the department [7]. Teaching students gave J.F. Ahlfeld a unique pleasure – he liked to involve interested students in practical work and allowed them to discuss clinical cases actively. While teaching at the University of Leipzig, in 1874, Johann Friedrich Ahlfeld published his own textbook of obstetrics for scientific and practical classes - "Lehrbuch der geburtshilfe zur wissenschaftlichen und praktischen ausbildung fur arzte und studierende bearb." [4].

Picture 3. Textbook of obstetrics for scientific and practical classes written by J.F.Ahlfeld

Johann Ahlfeld was one of the few medical researchers of that century who attached great importance to the study of intrauterine malformations, deformities of the human body. His scientific

works helped to bring teratology to a new level in the second half of the XIX century. In 1880, Johann Friedrich Ahlfeld published the atlas "Die Missbildung des Menschen" ("Human deformity"), in which he systematically described congenital malformations of human development and explained the ways of their origin [5].

Picture 4. The atlas "Human deformity", written by J.F. Ahlfeld

J. F. Ahlfeld possessed an excellent library of teratological works, part of which has been preserved unchanged in the Welch Library of the Johns Hopkins University School of Medicine (Baltimore, USA) [9].

In 1883, Johann Friedrich Ahlfeld was invited to Marburg as a professor and head of the Royal School of Obstetrics [8]. During his practice in Marburg, J. F. Ahlfeld explained the importance of infection in the etiology of postpartum fever. His experiments with the disinfecting effect of alcohol led to the introduction of alcohol disinfection of hands, named after him, in practical obstetrics and surgery. Johann Ahlfeld also believed that a newborn baby should be protected from cooling from the moment of birth, which is why he recommended immersing a newborn in asphyxia in warm water after mucus is sucked out of the respiratory tract [2].

Johann Friedrich Ahlfeld died on May 24, 1929 in Marburg. The result of his labors and discoveries was such crucial new knowledge that his contemporaries called Ahlfeld "the most thoughtful and scientifically fruitful obstetrician of his time."

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