

Opinion

From Assoc. Prof. Dr. Stoyan Ivanov Pavlov, MD,

Head of the Board of Dermatology and Venereology at the Department of Infectious Diseases, Parasitology and Dermato-venereology, Faculty of Medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna. Member of the Scientific Jury, according to Order № P-109-224 / 19.05.2021 of the Rector of the Medical University - Varna, pursuant to a Decision of a meeting of the Faculty Council at the Faculty of Medicine at the Medical University - Varna under Protocol №43 /11.05.2021

Subject: Defense of the dissertation of Dr. Kristina Vasileva Semkova, PhD student at the Department of Infectious Diseases, Parasitology and Dermatovenereology on the topic „INFANTILE HAEMANGIOMAS – EPIDEMIOLOGICAL CHARACTERISTICS AND MANAGEMENT APPROACH“ with supervisors Assoc. Prof. Zhana Stoyanova Kazandjieva, Ph.D. and Prof. Dr. Sonya Stoyanova Marina-Kirova, Ph.D. by field of higher education: 7. Healthcare and sports, professional field 7.1. Medicine and, in the scientific specialty " Dermatology and venereology ". The dissertation was approved and directed for public defense, after hearing a meeting of the Department Council -4 / 23.04.2021.

Presentation of the candidate:

In 2005 Dr. Kristina Vasileva Semkova graduated in medicine at MU-Sofia with honors. In the following years he specialized successively in Clinical Dermatology at the St Johns Institute of Dermatology, Royal College, London, UK; Dermatology and Venereology at the Clinic of Dermatology and Venereology of the Medical University of Sofia, Dermatohistopathology at the St Johns Institute of Dermatology, Royal College, London, UK; Dr. Christina Semkova is currently a consultant dermatologist and dermatohistopathologist at St. Thomas Hospital, London, UK.

The dissertation „INFANTILE HAEMANGIOMAS – EPIDEMIOLOGICAL CHARACTERISTICS AND MANAGEMENT APPROACH“ for obtaining the scientific and educational degree "Doctor" of Dr. Kristina Vasileva Semkova contains 131 pages and is illustrated with 9 tables, 27 figures and 3 appendices. The bibliography (Vancouver style) is from 168 sources in English.

Evaluation of the structural parts of the dissertation

The **literature review** (18-28 pages) is written in a high scientific style and with proper use of terminology, consistently arguing the relevance of the developed topic. The object of the dissertation of Dr. Kristina Semkova are hemangiomas in infancy and childhood. They are "...

the most common benign tumors in children under 1 year of age, affecting approximately 4-5 to 10% of those born in normal gestational age and up to 30% of premature infants." The literature review describes and covers in detail the developed topics in epidemiological and clinical order. The social significance of the problem is substantiated and the perspective therapeutic directions for treatment and prevention of the complications of juvenile hemangiomas are considered. With **its goal and objectives**, the dissertation focuses on the role of peri- and prenatal factors for the appearance and development of hemangiomas in infancy and childhood. A new local method for their treatment is being studied and a working algorithm for diagnostic and therapeutic behavior is proposed. In this sense, the purpose of scientific work has been formulated clearly, and put 11 tasks properly reflect the ways and consistency in its implementation. The various studies included a total of 304 children of both sexes diagnosed at the Clinic of Skin and Venereal Diseases / CCVB / at the University Hospital "Alexandrovska" EAD, Sofia; Euroderma Clinic, Sofia; university clinics and private dermatological practices in Sofia and the country. All of them have the presence of hemangiomas in infancy or childhood, regardless of previous treatment, and are selected for an 11-year period (2010-2020). Their age varies from 2 to 48 months. Methods include epidemiological studies, clinical-morphological studies, clinical therapeutic trials, methods of statistical conclusions and hypothesis testing. **The results** of Dr. Kristina Semkova's own research are well and in detail visualized graphically. Illustrations is enriched with extremely high quality photos that show the therapeutic effect of the applied agents, and involution of vascular tumors. Dr. Semkova used an original scale to assess the severity of hemangiomas and the effect of treatment as part of the study: Haemangioma Activity and Severity Index (HASI). This scale emerges as a promising diagnostic tool that can give therapeutic direction to each case. The results of clinical therapy studies justify topical treatment with timolol maleate as: "effective in reducing the size of the hemangioma and accelerating the process of regression." Topical application of timolol is innovative for therapeutic practice in Bulgaria and offers an alternative to systemic therapy of hemangiomas with a beta blocker. Hemangiomas in infancy and childhood are undoubtedly a significant interdisciplinary problem that unites the efforts of dermatologists, pediatricians, surgeons, pharmacologists. In the study, Dr. Kristina Semkova covered 48 families, and the results obtained "fully support the concept of a significant effect of hemangiomas on the psycho-social functions of the daily lives of patients and their parents." Their course in the first months and years of the child's life also affects the family quality of life. The discussion of the results leads to **conclusions** (7 in total) that identify risk factors for the Bulgarian population for the development of hemangiomas: "female prematurity, low weight at birth, problems during pregnancy and placental abnormalities. The efficacy and safety of timolol maleate treatment have been argued. **The contributions** of the scientific work of Dr. Kristina Semkova are divided into Original - 5 in number, scientific theoretical - 2 in number, scientific - practical and confirmatory - 4 in number, I accept entirely.

The abstract presented by the doctoral student meets the structure of the generally accepted requirements and reflects in a synthesized version of the dissertation.

On the topic of her scientific work, Dr. Semkova has presented 3 full-text publications, of which she is a leading author in peer-reviewed foreign journals. Dr. Kristina Semkova is also a co-author of a paper published in a Bulgarian scientific journal: "Consensus of the Bulgarian Expert Group for the Treatment of Hemangiomas". On the topic of the dissertation, Dr. Sevkova has participated with scientific reports at 10 international scientific forums, and in nine of them she was a leading author.

Conclusion:

The presented dissertation is a completed and well-structured scientific work, fully covering the requirements for scientific work for the acquisition of educational and scientific degree "doctor". This gives me a reason to vote positively and to propose to the esteemed members of the Scientific Jury to award Dr. Kristina Vasileva Semkova the scientific degree "Doctor" in the field of higher education: 7. Health and Sports; Professional field: 7.1 Medicine; Doctoral program "Dermatology and Venereology".

21.06.2021

Assoc. Prof. Dr. Stoyan Ivanov Pavlov, MD

