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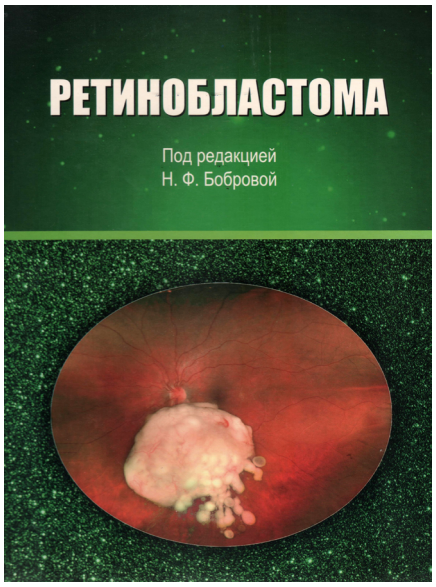

A monograph of the current aspects of diagnosis and management of retinoblastoma (RB), a pediatric ocular malignancy, was presented by an international team of authors from the Institute of Eye Diseases and Tissue Therapy, AMS of Ukraine, Odesa; Spizhenko Clinic Oncology Center, Kyiv, Ukraine; Jules Gonin Eye Hospital, Lausanne, Switzerland; and Retinoblastoma Referral Center, University of Siena, Italy. The book describes the current imaging modalities in the diagnosis of eye cancer, such as ultrasonography, spectral optical coherence tomography (SOCT), fluorescent angiography (FA) and magnetic resonance imaging (MRI). Details (procedural features, complications and outcomes) with regard to first-line eye-saving treatment, polychemotherapy (systemic, intracameral, intravitreal, intra-arterial, and combination chemotherapy) and second-line eye-saving treatment, radiation therapy, for retinoblastoma are discussed. Specifically, the following is described: a RB presenting a high risk of dissemination; novel enucleation techniques involving use of high frequency electric welding of biological tissues to prevent intraoperative dissemination of tumor cells; and prevention and management of anophthalmic syndrome. The monograph presents the features of RB regression, and development and treatment of tumor recurrence. It also includes the latest data on retinoblastoma diagnosis and treatment under COVID-19 pandemic conditions. The book is illustrated with 322 color photographs and 21 tables, and includes 27 example cases. It was written for ophthalmologists, oncologists, eye surgeons, family physicians and pediatricians.

Book Review: Bobrova NF, editor. [A monograph of Retinoblastoma]. Odessa: Izdatelskii tsentr; 2020. 324 pages. In Russian.

Reviewed by: G.D. Zhaboedov, Prof., Dr Sc (Med), Associate Member of the NAMS of Ukraine

The monograph edited by N.F. Bobrova, Prof., Dr Sc (Med), Honored Worker of Science and Technology of Ukraine, presents the milestones which marked the evolution in the diagnosis and clinical observation of and treatment methods for retinoblastoma since the first reports on this tumor.

Although retinoblastoma is a rare intraocular malignancy affecting mostly infants, it is by far the most common intraocular tumor, accounting for approximately 98% of all cases. A highly malignant retinoblastoma may cause death in the absence of early diagnosis and treatment. Unfortunately, the first symptoms of retinoblastoma are not always correctly interpreted by eye care practitioners, which results in undue delay in treatment and worsened prognosis for not only eye salvage, but also for salvage of life of the pediatric patient. This is why the book is highly relevant and of practical value for ophthalmologists.

Section I presents the historical aspects; this indicated that the authors have done a lot of studying of the issue, taking into consideration the experience accumulated by previous researchers. In addition, it presents the epidemiology of the disease, which is important for understanding both the extent of tumor spread and the age-related features of the process.

Section II covers the clinical features and diagnosis of retinoblastoma and comprises several subsections in which disease symptoms, tumor growth types, and clinical manifestations are discussed in details on the basis of great experience and large amount of clinical material accumulated by the Pediatric Eye Clinic of the Filatov Institute throughout its 70 years of existence. Special attention was paid to leukocoria, the most common symptom of retinoblastoma, and the Red Reflex Screening Test developed by the authors. The test allows not only the ophthalmologist, but, first of all, the parent and the pediatrician to identify the intraocular disorder in the child, which is of high practical value. The authors were the first to use the concept of "lag time" (the time between the onset of symptoms and diagnosis) in domestic publications. Their recent longitudinal lag-time analyses have demonstrated a reduction in time between appearance of first symptoms and final diagnosis of retinoblastoma, which indicated improvement in clinical suspicion and parents' awareness.

The subsection on diagnostic modalities discusses the technologies used currently in studies of children with retinoblastoma. Of special interest is the chapter entitled Differential Diagnosis of Retinoblastoma. On the basis of cases from the authors' personal experience, the chapter describes the major conditions from which the disease must be differentiated as well as clinical features that help differentiate the disease from other competing differential diagnoses.

Section III is titled Histology, Genetics and Classification of Retinoblastoma and covers the major pathomorphological features characteristic of various tumor types as well as genetic features of the tumor. A special chapter dealing with the historical and current classifications of retinoblastoma is certainly interesting because there is no universally adopted classification scheme for the disease.

Chapter 12 covers, on the basis of the literature and multiyear experience of the Pediatric Eye Department, the errors that have been made in diagnosis and intraocular surgery as well as the consequences of these mistakes in the presence

of retinoblastoma. Because such interventions may result in significantly worsened prognosis for salvage of life of the pediatric patient, the authors emphasize once more the need for taking into account the possible presence of intraocular tumor in atypical clinical situations, and warn against undue surgical zeal in such situations.

The section covering treatment of retinoblastoma is believed to be of value for clinicians. It describes in detail conventional currently employed treatment methods and novel technologies developed by the authors and covered by patents of Ukraine. The authors are European pioneers of intravitreal chemotherapy, and have determined safe cytostatic doses and introduction regimens on the basis of experimental studies. This resulted in the development of combination polychemotherapy for retinoblastoma which involved primary intravitreal chemotherapy, systemic chemoreduction and local tumor destruction. Studies demonstrated that, following combination polychemotherapy, the eye survival rate was as high as 75% for the T1 to T3 stages, with a reduction in the number of courses of systemic polychemotherapy.

It is interesting that the team of authors included the leading European specialists in retinoblastoma who have presented the results of their studies. Thus, Chapters 16 and 17 have been written by Swiss ophthalmologists, Professor F. Munier and K. Statopulos, MD, from University Eye Hospital, Lausanne, and are devoted to a novel intracameral chemotherapy technique, and to outcomes of intra-arterial chemotherapy for retinoblastoma. Chapter 18 has been written by Italian ophthalmologists, Professor D. Hadjistilianou and M. Girolamo, MD, and describes a 10-year experience of the use of intra-arterial chemotherapy for retinoblastoma in the Retinoblastoma Referral Center, University of Siena. The team of authors included world-renowned specialists in retinoblastoma, and this fact stresses that the material of the monograph is of high quality, and relevant, timely, and a valuable contribution to the field. In addition, it stresses that these specialists have a deep interest in close cooperation with their Ukrainian colleagues.

Radiologists from the Spizhenko Medical Center described external radiation therapy for retinoblastoma, thus contributing to understanding of ionizing radiation-induced processes in normal and tumor-affected tissues and complications thereof. Post-irradiation cataract is one of such complications. A special chapter covers clinical features and surgical treatment of this condition, which has a significant value for practitioners due to the scarcity of the disorder and the difficulty of this surgery.

Because patients with a retinoblastoma presenting a high risk of dissemination have a poor prognosis for survival, of particular interest is Section VI which presents histologic risk factors of tumor dissemination and clinical manifestations of this type of retinoblastoma. In addition, the section presents the clinical and histological parallels which can be helpful in assessing the severity and extent of tumor spread, and selecting an adequate treatment strategy. Although enucleation is the only option in such cases, it is difficult to perform because of the state of the eye as well as significantly increased requirements for ablastics (prevention of intraoperative dissemination of tumor cells). The authors developed novel enucleation techniques involving use of high frequency electric welding of biological tissues (HFEWBT) to prevent intraoperative dissemination of tumor cells and decrease the risk of complications. Mode selection for HFEWBT was made on the basis of experimental studies that have demonstrated the amount and spread of the effect of various high-frequency current modes on optic nerve tissues in the rabbit. The significance of novel enucleation techniques was acknowledged by patents of Ukraine.

Section VII discusses regression and recurrence patterns of retinoblastoma as well as approaches to the treatment of these patterns.

The monograph is concluded with appendices that present route and protocol for managing patients with retinoblastoma on the basis of current diagnostic and treatment modalities and those developed by authors.

The book is written in a lively style and is supported by numerous personal observations and illustrations of cases, which is especially interesting and valuable for ophthalmology practitioners, pediatric ophthalmologists and pediatricians.

Undoubtedly, the monograph is worthy of attention and should be appreciated as a treatise and practical guide to diagnosis and management of retinoblastoma, a rare and severe pediatric intraocular disease. Publication of this monograph will contribute to improvement in early diagnosis, efficiency of treatment and improved prognosis for not only life and eye salvage, but also for residual vision, improving the quality of life for pediatric patients with this severe disease.