Is Histopathology really needed for the ophthalmologist?

¿Cuán útil es para un oftalmólogo saber Histopatología?

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Dear editor,

Frequently, the specialty of Ophthalmic Pathology is disdained in our country. Proof of this is the fact that there are only 8 people with formal training and, unfortunately, a handful more working abroad, where they seek new opportunities and professional development, which is very difficult to provide in Mexico.

However, as in few specialties, adequate knowledge of microscopic anatomy is essential for the ophthalmologist, in order to achieve a better understanding of how and where to perform surgical procedures, as well as the physiology that allows some medications to work in a certain way, helping to plan the best therapeutic proposal in each case. In practice, many colleagues must send the samples to be analyzed to laboratories without the adequate training to interpret the findings and provide useful information, which also results in less complete training for our future colleagues. In addition, decision-making in the management of patients can be affected.

That is why in the IMO (Instituto Mexicano de Oftalmología), since the residency program was instituted almost 8 years ago, we aimed to complement the specialty with this department. This was achieved 4.5 years ago and has required sometimes a titanic effort. Fortunately, today we can say that, along with our 300,000 attended patient, we also celebrate the achievement of our 1000th histopathological study in our pathology

laboratory on August 27. From February 2014 to date, we have had an exponential growth, and in these 8 months of 2018 we have reached 200 biopsies studied.

In this journey of almost 5 years we have witnessed a radical change in the mentality of our graduate and training ophthalmologists, who have assumed the responsibility of sending every tissue sample they obtain from the daily procedures performed on the patients of the institute. The samples we analyze in the laboratory range from cell smear of ocular surface lesions to intraocular fluid biopsies, orbital mass resections, and perhaps most importantly, tissues usually discarded in most of our hospitals, such as curettage products with a clinical diagnosis of chalazion, evisceration products and "underrated" pterygia. With regard to this last group of samples, it is worth mentioning that, thanks to the fact that three years ago we found in our hospital, in a pilot study about to be published, a frequency close to 12% of precursor changes of malignancy (ocular surface squamous neoplasia, OSSN) in pterygium, efforts have been redoubled and we established a new protocol that aims to detect early the presence of dysplasia both clinically and in the products of pterygium surgery, which has led to more timely interventions and to improve the prognosis, morbidity and quality of life of these patients. Currently, our residents have a full course of Ophthalmic Pathology, which covers each of the segments of the eyeball and aims for students to

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acquire a firm knowledge on this subject, which can be evaluated in the national and international tests they present.

Other areas of opportunity in the field of Ophthalmic Pathology that we are currently exploring in the institute are those related to the study and implementation of tissue response to variants of medical treatments (use of drugs, alternative molecules, etc.) or related to proposals of modifications in surgical techniques that imply greater accessibility for the patient with a better cost-benefit ratio (for example, intraocular devices or surgical instruments with optimal design, but cheaper than those currently on the market), which constitute protocols in course in collaboration with the Anterior Segment and Retina departments.

Additionally, in the field of the study of risk factors associated with habits in our geographical regions, such as occupational, food and/or environmental toxins, we have recently taken on the task of studying both the effects of the alleged greater ultraviolet radiation present in our area (Bajío), as well as to determine in a fairly approximate way the amount of protein present in representative samples of the fast food most commonly consumed by our population. The latter is motivated by the fact that for several years now, we have had the unprofitable first place worldwide in childhood obesity, with the subsequent increased risk for diabetes mellitus and its ocular manifestations from an early age. These two works are the subject of ongoing publications.

As part of the continuous medical education program promoted by our hospital, I had the opportunity to attend the Ophthalmic Pathology Service of the Mc Gill

University Hospital in Montreal for a month, where I acquired valuable tools for the implementation of laboratory techniques, as well as the update in the knowledge of the most recent advances in the specialty. In addition, it has been possible to establish a close collaboration with said laboratory for academic purposes, interconsultation of interesting cases, publications and participation in international events, among others.

At a national level it is of our special interest to work for the dissemination of knowledge of Ophthalmic Pathology throughout the republic, carrying out sessions with associations of subspecialties, such as the Orbit association from the state of Jalisco, with whom we shared an update on the «Usefulness of Immunohistochemistry» in orbit-located lesions a few weeks ago in the city of Guadalajara.

This is the opportunity to call all colleagues to become aware of the importance of extracting all possible information from the microscopic study and laboratory techniques of any tissue sample obtained from our patients, knowing that it is an invaluable opportunity to perform early diagnoses that increase the probability of cure or improve the prognosis for several entities. In view of this perspective and the growing need to protect the daily ophthalmological practice from medical-legal problems, it should be mandatory in all our hospitals to study all the tissues recovered both in the operating room and in the office.

Conflicts of interest

The authors declare no conflicts of interest.