Possibilities and Pitfalls

We all enjoy challenging pathology. Challenging diseases stimulate us to read about them, and by understanding them, we’re able to more accurately diagnose and treat these problems. However, recurrences are never welcome, and pterygium is one of the classic recurring problems. They appear, get inflamed endlessly, and have the tendency to re-grow after excision.

So, a textbook dedicated entirely to pterygium is a welcome addition to the literature. Dr Hovanesian, of the Jules Stein Eye Institute in Los Angeles, California, has gathered a group of ocular surface specialists to help him write Pterygium: Techniques & Technologies for Surgical Success. Published by Slack Incorporated, this concise book of 140 pages offers the reader an up-to-date summary of the possibilities and the pitfalls in pterygium treatment.

Pterygium, the authors inform us, is a Latin term derived from the Greek word meaning “small wing.” It has been described by physicians for thousands of years, and has always been recognised as a difficult problem.

Ambroise Paré, the 16th century surgeon to the French royal court, noted that “a pterygium is an illness that always recurs, even when you have done everything in your power to cure it.” This seems to still have an element of truth even today, despite extensive experience and precise surgical techniques. Indeed, “more than a hundred techniques for pterygium surgery have been described over the past several centuries because of concern over recurrence.”

The book begins with chapters on pterygium pathogenesis, which delves deep into the molecular mechanisms and their interaction with both genetic predisposition and environmental exposure. Ultraviolet light, oxidative stress and chronic inflammation are covered, as are the contributions of limbal stem cell abnormalities, antiapoptotic proteins and DNA damage.

The second chapter discusses historical approaches to pterygium surgery, including bare sclera and adjunctive beta radiation techniques. However, it quickly moves on to more interesting, successful and therefore relevant surgical methods.

Chapter 3 covers pterygium excision with conjunctival autograft, including postoperative therapy and potential complications. Fortunately, “conjunctival grafts never fail, and even minor complications are extremely uncommon,” say the authors.

Adjunctive substances, including fibrin tissue adhesive, 5-fluorouracil and mitomycin-C are discussed in individual chapters. Although the use of fibrin tissue adhesive is encouraged, “considerable debate still exists as to the safest and most effective use of antimitabolite adjuncts in the setting of pterygium surgery.”

The next two chapters cover the history of amniotic membranes in pterygium surgery and the use of amniotic membrane for conjunctival reconstruction. This chapter discusses the use of amniotic membrane not only for pterygium surgery, but also for conjunctival chalasis, fornix reconstruction, chemical burns and glaucoma surgery with conjunctival complications. The next chapter covers the use of amniotic membrane grafts for pterygium only. This is followed by a chapter on amniotic membrane placement beneath the surrounding, healthy conjunctiva after conjunctival autograft.

Of course, a book like this requires chapters on postoperative management and complications and the management of recurrence (chapters 10 and 11, respectively). As a sort of added bonus, Dr Hovanesian has included a final chapter on the diagnosis and surgical treatment of conjunctival chalasis, which is caused by the absence of subconjunctival Tenon’s fascia that normally provides adherence of the conjunctiva to the scleral surface.

This book is primarily suitable for corneal and ocular surface disease fellows who are interested in refining their surgical skills and insight and their understanding of this challenging pathology.

Ophthalmic surgeons looking to either start treating pterygium surgically, or would like to decrease the incidence of recurrence in their patients would be advised to purchase this book. Further, ambitious residents who might want to make a good impression during their cornea rotation, as well as assisting staff interested in keeping up with what goes on under the knife, will also benefit from reading this text.