

## New Consideration for Old Conditions

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With the exponential explosion in knowledge, and the ease of dissemination of this information, medical professionals have to struggle with keeping up on the latest findings that affect the care of our patients and be able to sift through the ever-proliferating number of journals. In ophthalmology, this is no different: new formulas for calculating intraocular lens implant powers, new drugs for treating glaucoma and retinal disorders, new diagnostic modalities for corneal infections, and the increasing reliance on modern imaging are constantly challenging ophthalmologists to maintain current knowledge. In addition, a better understanding of the pathogenesis of diseases continues to evolve.

For those interested in cornea, ocular surface disease (OSD), lamellar keratoplasty, and keratoconus are not new concepts by any means. However, as science and society have evolved, even these “common” conditions now have new causes, treatments, and associations for which we all must be cognizant. For instance, with the “electronic age” upon us, “screen time” has now been found to be associated with dry eyes and OSD.<sup>1</sup> Although it has long been recognized that antiglaucoma medical therapy is associated with OSD, there have been many new such medications brought to market recently, and the ophthalmologist must be aware of the possible ocular surface changes brought on by these medications.<sup>2</sup> In addition, a better understanding of the concept of a microbiome has had researchers looking for links between microbiomes and diseases. Specifically for the eye, the ocular surface microbiome has been found to influence dry eyes.<sup>3</sup>

Even contact lenses have evolved significantly. Although it is being increasingly recognized that soft contact lenses can cause ocular surface discomfort,<sup>4</sup> scleral lenses and other therapeutic lenses are becoming more and more popular for treating ocular surface disease, even for severe cases that involve limbal stem cell deficiency (LSCD).<sup>5</sup> When medical therapy for LSCD fails, surgical alternatives exist, and many new techniques are now available.<sup>6</sup> All of these important ocular surface disease concepts are presented in this issue of the journal by leading experts from around the world.

Keratoconus is also not a new condition, as it has been recognized for centuries and the classic teaching was that it is a noninflammatory ectasia. Even this most basic teaching is now being analyzed as there has been a knowledge explosion that puts into question our long-held basic understandings. Before 1994, there were approximately 750 peer-reviewed publications on the topic of keratoconus. Since then, there have been more than 5000 peer-reviewed publications on this old topic.<sup>7</sup> Although the topic is old, there is so much new information about keratoconus including biochemical markers and alterations in the cornea,<sup>8</sup> environmental factors,<sup>9</sup> and methods to determine progression of the disease.<sup>10</sup> There are also new therapies for treatment including crosslinking,<sup>11</sup> Bowman layer transplantation,<sup>12</sup> lamellar keratoplasty,<sup>13</sup> and even cellular therapy for the corneal stroma.<sup>14</sup> Each of these interesting and important topics is also presented in this issue by global authorities in the field.

We have attempted to gather recognized international experts in the field to present reviews on today’s most critical and challenging cornea topics. In addition to these important subjects in this special issue of *Asia-Pacific Journal of Ophthalmology*, the underlying message that we cannot miss is that ophthalmology is and will continue to evolve. With the increasing time constraints that the modern ophthalmologist encounters, the task of staying abreast of the ever-changing faces of medicine becomes increasingly difficult. There is always more to learn, and we should continue to strive to improve our understanding of diseases to help our patients. We hope this special edition of the *Asia-Pacific Journal of Ophthalmology* assists the reader in this formidable task.

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