Comments on: Are we treating the effect and neglecting the cause of keratoconus?

Dear Editor,

As we are all aware that Keratoconus (KC) is a non-inflammatory corneal ectatic pathology where the central or paracentral cornea undergoes progressive thinning and steepening resulting in irregular astigmatism and myopia. We read the article by Dudeja et al.\(^1\) and we were deeply impressed by the authors on stressing an important concept which we were probably neglecting earlier. We congratulate the authors and thank them for igniting the spark in us for in-depth analysis of keratoconus pathology and management. Here, we want to share few of the recent pathbreaking innovations in KC which we feel will be beneficial for all the readers. Here are a few of them-

1. Bowman layer (BL) transplantation for advanced keratoconus- Dragnea and colleagues demonstrated that BL transplantation results in corneal stabilization in eyes with advanced KC, enabling continued contact lens to wear for normal visual functionality\(^2\)

2. Pulsed Corneal Collagen Crosslinking (CXL)- effective in both stiffening the cornea and halting the progression of KC by increasing the efficiency of high fluence CXL. Herekar et al. first proposed the use of pulsed illumination to increase oxygen concentration during CXL by allowing diffusion of oxygen during pauses\(^3\)

3. Contact Lens assisted Crosslinking (CACXL) – CACXL technique has been proven to be a safe and effective technique for performing cross-linking in corneas less than 400 µm after epithelial abrasion and appears effective based on stromal demarcation line depth\(^4\)

4. Corneal Allogenic Intrastromal Ring Segments (CAIRS) Combined With CXL for KC- Jacob et al. in their pilot study proved that CAIRS with CXL is a simple, safe, and effective option for treating keratoconus.\(^5\)

Other recent advances to name a few are Pre- Descemetic Deep Anterior Lamellar Keratoplasty (DALK) for acute hydrops, pinhole pupilloplasty based on Stiles Crawford effect for managing irregular astigmatism and IVMED-80, a twice-daily copper-containing topical formulation is also under research for its effect on increasing lysyl oxidase activity, corneal biomechanical properties, and stiffness. These are few of the important innovations and advances in keratoconus and the list is evergrowing. There is a huge scope of research and development in keratoconus in near future and we must eagerly aim to grab these opportunities with both hands.

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Conflicts of interest

There are no conflicts of interest.

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