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On the holy grail of antibrotics in trabeculectomy: Amniotic membrane, collagen implant versus mitomycin C

Kirti Singh and Divya Jain Maulana Azad Medical College, India

Use of Mitomycin C (MMC) as an antifibrotic to enhance trabeculectomy bleb survivalis fraught with complications like bleb leak, hypotony, thin avascular cystic bleb, blebitis and endophthalmitis.

The quest for a safer alternative led us to use amniotic membrane as a substitute. Over the last 10 years we virtually switched over to commercially available amniotic membrane and used it in over 130 eyes in patients where antifibrotic use was indicated (younger than 50 years, high risk for bleb failure). This highly effective, cost friendly modality requires no special toxic disposal regimen like MMC and requires no learning curve in surgical procedure. Bleb morphology with use of amnion is morehomogenous, with no thin walled blebscompared with MMC blebs as evident on anterior segment OCT imaging.

Another recently available antibrotic – the biodegradeble collagen implant ($Ologen^{TM}$) has been used by us in in 30 eyes of 30 patients. This implant modulates wound healing by directing orderly collagen fibril deposition on a porous framework. Over a maximum follow up of 7 years no complications like extrusion, endophthalmitis, bleb dysthesia or overhanging cystic bleb were noted. The implant slowly absorbs over a 9-10 month period. In five patients where both eyes had to be operated implant was placed in one eye and the other eye was subjected to a MMC augmented trabeculectomy. Implant bleb was less ploycystic, less avascular and had thicker healthier walls with lesser height as evidenced by UBM and OCT imaging.

Biography

Kirti Singh completed her postgraduation from All India Institute of Medical Sciences in 1989. A faculty in Glaucoma division, Department of ophthalmology of Maulana Azad Medical College, New Delhi, India for the last 18 years. Recipient of AIOS Young Ophthalmologist Scholarship 1999, Commonwealth fellowship 2000, FRCS degree 2000, WHO Scholarship 2010.Contributed 15 chapters in text books, 50 publications in indexed /non indexed journals, over 250 lectures at state, national and international conferences. Head of Low Vision and Contact lens division, honorary faculty of Occupational & Environmental health department. She is a regular compère for national radio/television in health programs.

mail4kirti@gmail.com