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On the Holy Grail of antibiotics in trabeculectomy: Amniotic membrane, collagen implant versus mitomycin C

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Use of Mitomycin C (MMC) as an antifibrotic to enhance trabeculectomy bleb survival is 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 more homogenous, with no thin walled blebs compared with MMC blebs as evident on anterior segment OCT imaging.

Another recently available antibiotic – the biodegradable collagen implant (Ologen™) has been used by us 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 dyesthesia 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 polycystic, 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, Dept 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 compere for national radio/television in health programs.

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