

# 77-Subconjunctival treatment of Ocular Cicatricial Pemphigoid (OCP) with Mitomycin-C (MMC)

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Ocular Cicatricial Pemphigoid (OCP) is a disease of progressive subepithelial fibrosis, leading to conjunctival scarring, symblepharon formation, forniceal foreshortening, and eventual visual destruction of the eye. Systemic immunosuppression has been used to treat OCP with moderate success. However, such treatment carries with it the potential for severe and sometimes life-threatening side effects, including anemia and neutropenia.

Because of the contribution of fibrosis to the pathogenesis and prognosis of OCP, Dr. Eric Donnenfeld, MD, of Rockville Center, NY hypothesized that Mitomycin-C (MMC), a alkylating agent which is a potent inhibitor of fibroblast proliferation that is used to enhance trabeculoplasty, might be used to treat OCP as well. Co-authors of this study include Henry D. Perry, MD, Avi Wallerstein, MD, and Gerard D'Aversa, MD, all also from New York.

Nine patients with stage 3 or stage 4 OCP were entered into this prospective trial. All patients had either worsening of their disease, or suffered from severe side effects while on systemic immunosuppression. Treatment, in general, was offered in the clinically worse eye, with the clinically better eye remaining untreated as a control.

Each treated eye received a subconjunctival injection of 0.25 cc of 0.2 mg/ml MMC to both the superior and inferior bulbar conjunctiva with a 26 gauge needle. The total amount of MMC given was 0.1 mg in each treated eye.

Conjunctival erythema and conjunctival cicatrization were the clinical parameters used to judge response to treatment. Conjunctival shrinkage and cicatrization was documented by photography. All treated eyes had worse conjunctival erythema compared to the fellow control eyes at baseline. Patients were followed for a mean of 23 months.

Eight of 9 patients (89%) showed quiescence and stabilization of their OCP in the treated eye by serial photography. One treated patient demonstrated progression of her symblepharon. In comparison, 5 of 9 the untreated eyes (55%) showed progression of their disease, as documented by serial photography showing increased symblepharon formation or loss of the cul-de-sac.

There were no significant complication in the treatment eyes. One potential complication of treating OCP with local rather than systemic treatment, Dr. Donnenfeld acknowledged, is that the systemic manifestations of the disease are not addressed. For example, strictures of the esophagus in OCP may actually cause asphyxiation. This potential complication is not addressed by local therapy with MMC.

However, in those OCP patients either unresponsive to systemic immunosuppression, or those suffering from serious complications from immunosuppression, Dr. Donnenfeld concludes that the use of subconjunctival MMC may be a safe and effective treatment, either alone or in conjunction with other therapeutic agents.

This paper was discussed by Michael B. Raizman, of Boston, MA. OCP begins by deposition of antigen and compliment in the conjunctival, leading to progressive scarring and eventual loss of vision.

How can MMC inhibit what is essentially an autoimmune process? Dr. Raizman stated that it is reasonable to postulate that MMC, by inhibiting DNA synthesis in fibroblasts, can halt symblepharon formation. However, to assume that MMC can similarly halt the immune-mediated inflammation that is an integral part of OCP would require a rethinking of the pathogenesis of this disease, or the mechanism of action of MMC.

After MMC trabeculoplasty, it is commonly observed that the overlying conjunctiva is thin and avascular. Perhaps MMC has an additional action against vascular proliferation, which might be the mode of its anti-inflammatory action in OCP.

Despite the fact that OCP is a systemic disease, often its most serious, and sometimes only manifestations, involve the eye. Therefore, in Dr. Raizman's opinion, it is reasonable in such cases to use a local agent such as MMC to control these ocular manifestations. Further studies employing randomization, better controls, and longer follow-up will be necessary to validate these early promising findings.