
Lipolytic diathermy*

STEPHEN L. BOSNIAK¹ and MICHAEL E. SACHS^{2**}

¹*Department of Ophthalmic Plastic and Reconstructive Surgery*; ²*Department of Maxillofacial Surgery; New York Eye and Ear Infirmary, New York, NY, USA*

ABSTRACT. Lipolytic diathermy may be used to contour the eyelids by sculpting prolapsed orbital fat with great accuracy. It obviates the risk of retrobulbar hemorrhage. It is less uncomfortable for the patient than the standard clamping-cutting-cauterizing technique. After performing 52 cases, this technique has not produced one case of retrobulbar hemorrhage or ectropion. However, care must be taken to avoid creating a deep lid sulcus by overzealous lipolytic diathermy.

Key words: prolapsed orbital fat; blepharoplasty; lipolytic diathermy

INTRODUCTION

Fat that prolapses into the eye lid through a dehiscence of the orbital septum or by distorting a thinned orbital septum creates a convexity of the anterior surface of the eyelid. These 'bags' may cause a significant cosmetic deformity as well as vague periocular complaints of irritation and epiphora. Standard blepharoplasty techniques include exposure of the fat pockets, clamping and transecting their bases, cauterizing the stumps. Traction on the orbital fat pockets may be painful and may cause a retrobulbar hemorrhage. Lipolytic diathermy is performed without traction on the orbital fat compartments and without risk of retrobulbar hemorrhage.

*Paper presented at IIIrd Meeting of the European Society of Ophthalmic Plastic and Reconstructive Surgery (E.S.O.P.R.S.), Trier, 20-21 September 1984.

TECHNIQUE

Standard blepharoplasty incisions are made. Skin-muscle flaps are developed. The prolapsed fat pockets are accentuated with gentle pressure applied to the globe. A 30-gauge stainless steel needle is inserted through the

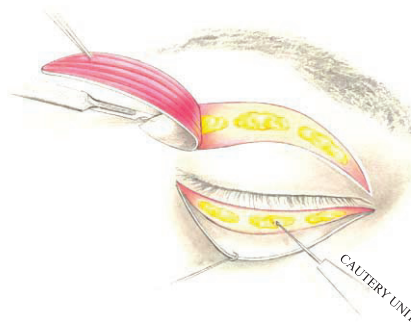


Fig.1. Lipolytic diathermy is applied to each fat compartment individually with a 30-gauge needle.

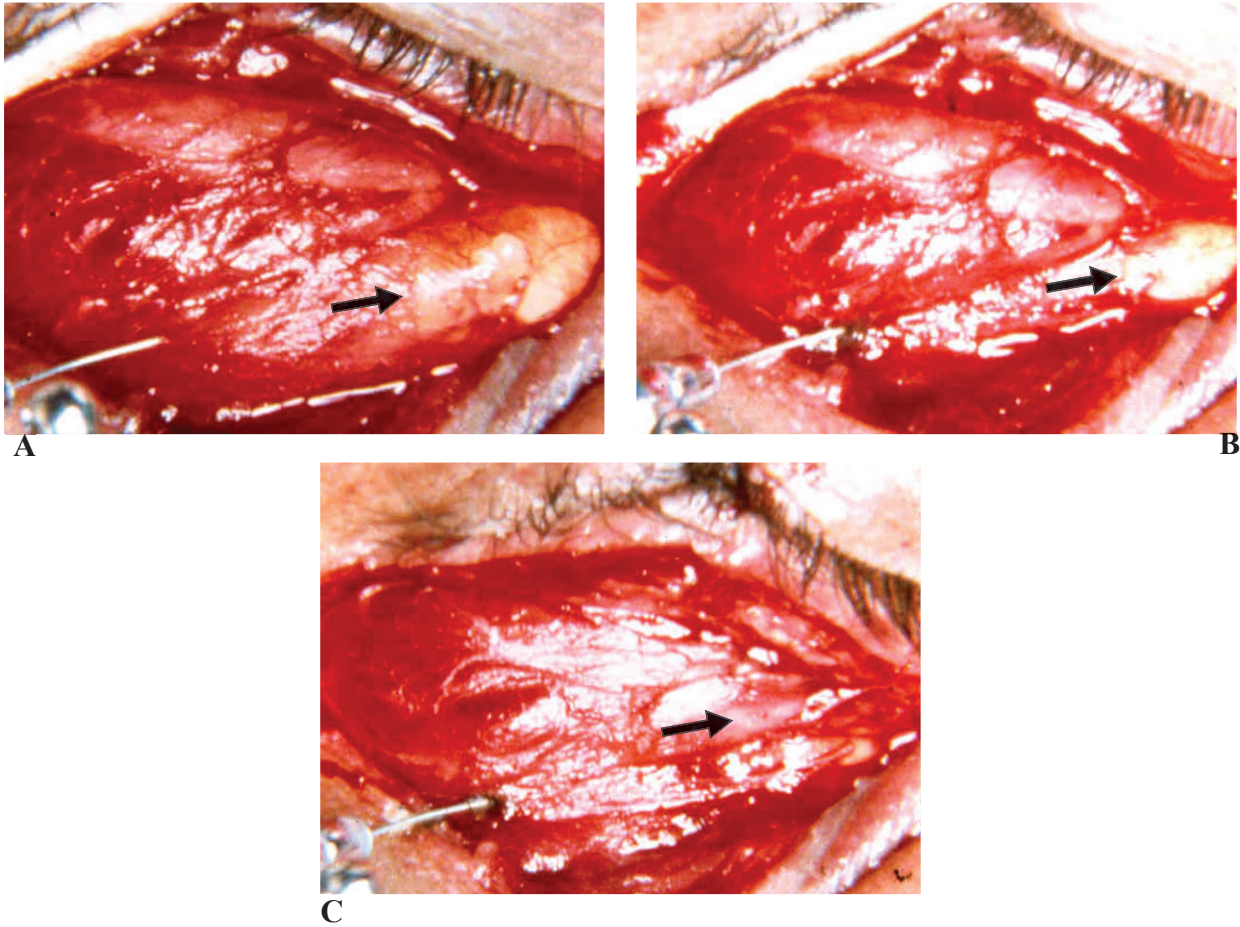


Fig 2. While pressure is maintained on the globe, electrical cautery is applied briefly and repeatedly to the hub of the stainless steel needle until the protruding fat is sculpted to the desired contour. This series of photos is taken from a 16mm movie. The arrows follow the progressive contraction of the fat pocket.



Fig. 3. A 32-year-old woman is prominent lower lid 'bags' (A). After lipolytic diathermy and a lower lid blepharoplasty (B) her lid contour is greatly improved.

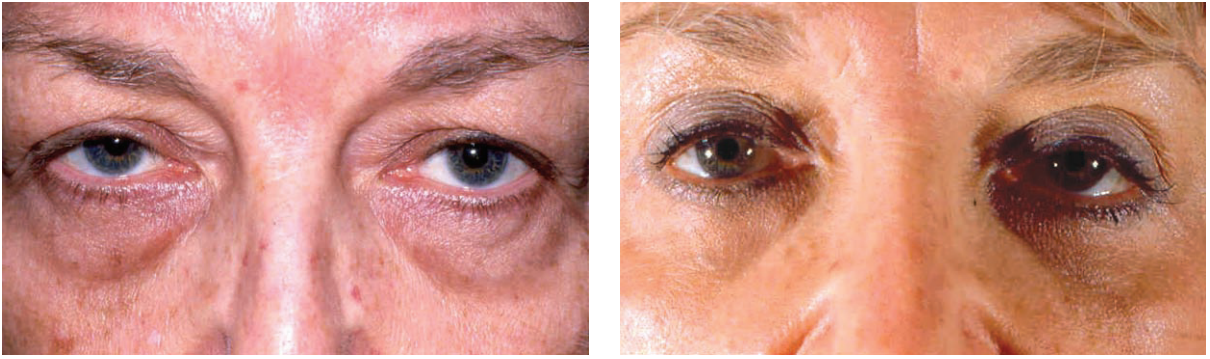


Fig. 4. A 45-year-old man with prominent prolapse of orbital fat in all four lids (A). After a four-lid blepharoplasty and lipolytic diathermy his lower lid contour and his upper lid creases are dramatically improved (B).

intact septum or directly into the fat pad tangentially, paralleling the plane of its anterior surface (see Fig.1). An electrical cautery is touched to the stainless steel hub of the needle and turned on in quick short bursts. Gentle pressure is maintained on the globe until the cauterized fat pad attains the desired contour (see Fig.2). Each prolapsed fat pad is similarly treated. The skin-muscle flaps are trimmed if necessary.

In cases where there was no excess of lid skin this technique was preformed through small skin incision. The needle was inserted into the offending fat pad and care was taken to retract the skin away from the needle. Deep placement of the needle into the orbit was avoided. Repeated gentle pressure on the globe was necessary to evaluate the amount of lipolytic diathermy necessary to get the desired effect.

DISCUSSION

During the past two years we have utilized this technique in 52 cases. Complications were uncommon. There were no cases of ectropion or retrobulbar hemorrhage. In three cases secondary lipolytic diathermy resulted in deepened lid sulci.

In addition to dissolving the fat we performed to remove residual irregularities in lid contour. In two cases excessive lipolytic diathermy resulted in deepened lid sulci.

In addition to dissolving the fat we presume that lipolytic-diathermy may seal a true septal dehiscence or mildly fibrose a thinned orbital septum, thus preventing further prolapse of orbital fat.

Lipolytic diathermy is an effective technique for contracting prolapsed orbital fat and recontouring the eyelids (see Figs. 3 and 4).