

# The Deep Plane Facelift

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## ■ INTRODUCTION

The literature is filled with controversy surrounding the etiology of facial aging. Gravity's effects on facial soft tissue, facial skeletal changes and fat/volume loss all contribute to facial aging, but disagreements exist on the contributions of each. Evidence of facial skeletal remodeling explains some aging changes in the older populace, specifically around the peri-orbital, pyriform and mandible region.<sup>1</sup> Current conventional wisdom has focused on fat/volume loss, "the volume model," over the effects of gravity on the facial soft tissue, "the surgical model," as the principal etiology contributing to the appearance of the aging face. This theory has been used to validate the use of volume enhancement as the main antiaging treatment modality.<sup>2</sup> Although popular, recent literature points to many factors that contribute to an illusion of volume loss and, to date, there has not been any study that proves that fat is actually lost in the aging face.<sup>3</sup>

Evidence supporting the surgical model abound. The normal physiology of soft tissue is to stretch secondary to intrinsic force, such as growth, weight gain or temporary factors such as pregnancy. Our understanding of soft tissue physiology is utilized by the reconstructive surgeon in the creation of tissue expansion techniques where extrinsic force is instead used to create soft tissue redundancy to repair soft tissue deficits.<sup>4</sup> In normal aging, the long-term effects of gravity's downward pull on the poorly anchored superficial soft tissue envelope proves to be the predominant factor. This is supported by simple facial palpation of the aged face and further

confirmed intraoperatively during deep-plane rhytidectomy procedures by the excessive soft tissue redundancy produced after the sub-sub muscular aponeurotic system (SMAS) dissection, flap mobilization and fixation has occurred (Figs. 5.1A and B).

In comparison, true fat/volume loss is evident in patients suffering from HIV wasting syndrome (Fig. 5.2). Here, a sunken appearance is present in these patients but facial palpation does not reveal excessive soft tissue redundancy, evidence inconsistent with the volume model as the principal cause of facial aging as well as their appearance as gaunt and sick, not aged.

Even if greater evidence exists to support the surgical model of soft tissue mobilization and resection of the accumulated redundancy as the main treatment modality to effectively reverse facial aging, the choice of the technique utilized is also controversial. By understanding both facial anatomy and embryology, our preference for the deep-plane rhytidectomy will become evident. In addition, this will expose the inadequacies and limitations of previous techniques, which both limited outcomes and created many of the aesthetic issues that caused the surgical model to come into question in the first place.

Techniques aimed at reversing gravity's effects have evolved as our understanding of facial anatomy has progressed. Mitz and Peyronie defined the superficial cervical fascia in 1976, demonstrating the SMAS to be a fibromuscular extension of the platysma muscle.<sup>5</sup> Skoog advanced facelift techniques by defining the significance of the sub-SMAS dissection.<sup>6</sup> Further improvement was made