

Outcome of use of barbed sutures in augmentation mastopexy: a case series

Abstract

Widespread adoption of barbed suture usage in aesthetic procedures has been noticeable in the recent years. The use of barbed sutures in breast lift procedures during augmentation mastopexy is not new but needs more support in the literature. In this case series, we describe 15 surgeries of such with minimal complication rates and high satisfaction rates among surgeons and patients; this supports the usage of such an adjunct in augmentation mastopexy and endorses their safety.

Introduction

Barbed sutures are synthesized from monofilament materials. Although different technologies have been used to produce barbed sutures, the mechanism of action is the same for all types and involves hooking the tissues onto barbs of the thread so that they subsequently become encased in fibrous tissues, initiating a biologic response (1,2).

There are many uses of barbed sutures in plastic surgery which became widely adopted in the recent years. Barbed suture devices were first used for minimally invasive facial rejuvenation techniques (1,3). Nowadays, more use of this technology is directed towards body contouring procedures like lifting significant skin redundancies and breast ptosis related to weight loss in order to improve operative outcome and in closure of large skin wounds (4,5). The advantage of this technology of tissue closure is the speed and easy placement. Another advantage of barbed sutures is that the deeper suture layer is not often required and thus less operative time is required. In addition, lesser complications are associated with barbed sutures than with more conventional suture material, including extrusion and infection (2). Finally, tissue tension may be uniformly distributed along the wound, and the hooking nature of the suture prevents tissue sliding with more than 20 points of fixation per square inch (6). Some authors even go further to suggest that the final scar outcome is improved from a clinical perspective due to less tissue-related ischemia and less suture extrusion (3).

In the recent years, augmentation mastopexy with the aid of barbed sutures has gained both positive and negative attention. Yet, more studies are needed to establish the procedure's benefits and the risks. Combining the use of barbed sutures within breast mastopexy procedures does not, however, seem to increase risks in properly selected patients (7).

In this case series, 15 cases with Regnault's grade II or higher breast ptosis underwent single stage augmentation mastopexy using the unidirectional barbed 2-0 suture, and the post-operative results were assessed by both the operating surgeons and by the patients who answered self-satisfaction questionnaire.