



Graft preparation and placement quality control: what physicians should know

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Introduction

Graft preparation and placement are essential to successful hair restoration, and these tasks are most often delegated to surgical assistants with minimal involvement from a physician. However, if the quality of the assistant's work is suboptimal, the quality of the physician's work would be compromised and the final result greatly affected. For that reason, addressing quality control (QC) in hair restoration is necessary. In the past, QC has not been addressed in a systematic way. This article will demonstrate quality standards related to graft preparation and placement and outline steps for physicians to follow to implement QC in their practices.

QC: Who, Why, When, and How

QC consists of setting specific quality standards relevant to obtaining desirable results, monitoring their implementation, and identifying as well as providing guidelines for correcting one's mistakes. QC is a continual process of comparing one's work against set standards, and in hair restoration it can be performed during and after the surgery. This article will focus only on the surgical portion of quality control. In addition, hair restoration is a team effort and, therefore, QC should be the responsibility of the entire team; each member of the surgical team should keep quality standards in mind and continually check his or her work against those standards, but ultimately QC is a physician's responsibility. A physician may trust his or her staff to deliver quality work but should be capable to perform and provide oversight on QC.

The objective for observing one's work is to determine whether the quality standards are obtained or could be attained. The purpose for seeking quality work is to ensure the following: maximum yield from harvested hair, maximum graft/hair survival, maximum re-growth from transplanted hair, and a natural and seamless result (re-growth).

Furthermore, QC is also a process of constant monitoring one's work for possible mistakes. Accordingly, mistakes that may occur during graft preparation and placement are grouped around those that can compromise hair yield and/or naturalness. All possible mistakes made by the surgical assistant are "human factors" considering that they cannot be blamed on faulty equipment. Common mistakes committed by surgical assistants encompass trauma done to the hair-bearing tissue and improper technique. The trauma relates to desiccation and physical damage, while improper technique includes lack of dexterity, lack of attention, lack of knowledge, and lack of magnification/sight. Trauma can be inflicted during slivering, dissecting, and placing grafts.

Drying out of slivers or grafts could result in poor growth (fewer than the transplanted hairs growing back with insufficient "coverage") or in an absence of growth (visible empty spaces where grafts were placed during the procedure but with no subsequent hair growth). Desiccation is caused by the assistant's ignorance or neglect. Oftentimes, assistants become too focused on a task so as to forget to hydrate the tissue; become involved in a conversation and neglect to hydrate the tissue; or overestimate their speed of dissection and/or placement and thereby unnecessarily expose grafts to the air and drying out. To preserve its moisture, harvested tissue should be completely immersed in the storage

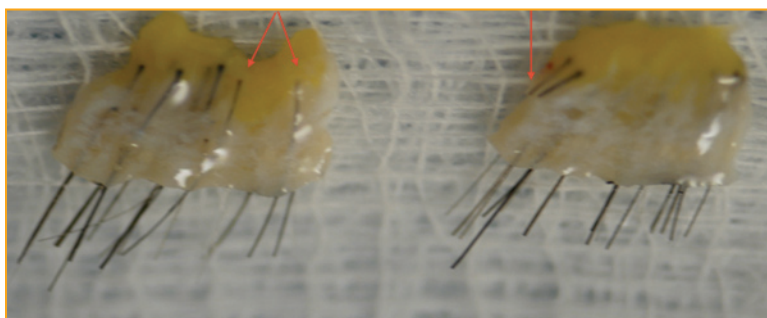


Figure 1. The sliver on the left demonstrates transection at its end, which is caused either by the physician during donor harvesting or by the assistant because of a forceful dissection. The sliver on the right demonstrates transection on its side, which is caused by the assistant during the slivering process.

COLUMNS

President's Message	2
Co-editors' Messages	3
Editor Emeritus	5
Letters to the Editors	13
Hair Sciences: Interview with Dr. Angela Christiano	14
How I Do It: Powered blunt dissection with the SAFE System for FUE Part II: the extraction process	16
Cyberspace Chat: Body hair and finasteride therapy in men	18
Hair's the Question	21
Message from the Program Chair of the 2011 Annual Meeting	26
Surgeon of the Month: Kenichiro Imagawa, MD	28
Surgical Assistants Corner	29
Classified Ads	30

ARTICLES

A personal journey in training hair transplant technicians: the use of sheep's skin as material for practice	9
A case report on the reactivation of alopecia areata and widespread nonpigmented hair regrowth after hair transplantation surgery	10
Slivering of the donor strip in normal saline to avoid graft desiccation	12
Review of the 6th World Congress for Hair Research	24
Prevention of cross contamination while using the binocular microscope	29

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