How I Do It

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In this issue we have an excellent personal tip from our editor emeritus, Dr. Paco Jimenez. The use of a blunt microcannula to minimize pain in anesthesia administration is clearly described. Because patients may need further procedures to achieve the desired result, any kind of pain may deter them from coming back to you. Personally, I found his concept of deep and superficial infiltration very stimulating.

The use of the blunt microcannula for infiltrating anesthetics in hair transplantation

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Introduction

Any means to reduce pain during the infiltration of anesthetic solution is very important for the patient. Helpful techniques in minimizing such pain include using small caliber needles (I use 30 gauge needles) and low-volume syringes (1-3ml syringes); being gentle with the infiltration (infiltrate slowly); and the simultaneous application of vibration devices. Nonetheless, if I had to specify the most useful tool I have incorporated in my practice concerning anesthesia, it would be the use of the blunt microcannula for infiltrating the anesthetic solution (Figure 1).

A microcannula has a blunt closed end and the solution is extruded though a lateral hole. It is flexible, long (4-5cm), and very thin (25-30 gauge). The microcannula has been used in Europe for the past two years with great success for infiltrating dermal fillers (e.g., hyaluronic acid). Its main advantages lie in the reduction of pain during the infiltration (since there is no sharp end); the absence of bruising (the blunt end does not break vessel walls); and the reduced risk of intravascular injection of the filler. After using the microcannula for a while, I have noted a significant reduction in patient pain when compared with the traditional use of 27-30 gauge needles in administrating dermal fillers. This observation led me to consider the use of the microcannula for infiltrating the anesthetics in the donor and recipient areas in hair transplant surgery.

After using the microcannula in hair transplantation, I realized that the infiltration of the anesthesia was almost painless. Moreover, the anesthetic effect lasted longer due to the infiltration of more volume and consequently more diluted anesthetic solution.

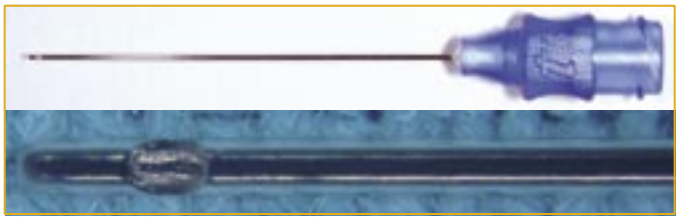

Figure 1. *Top:* Flexible blunt 27 gauge microcannula. *Bottom:* Close-up photo of the blunt distal end showing the lateral distal hole where the anesthetic solution is extruded.

The Procedure

There are several brands of microcannulas that work equally well, such us Pix'L (www.thiebaud.fr), SoftFil® (www.softfil-pro.com), CSH® (www.tsklab.nl), or the recently FDA-approved Dermasculpt® (www.dermasculpt.net). Microcannulas are disposable and cost approximately 5 to 6 Euros per unit. I use one 25 or 27 gauge 40-50mm-long microcannula per patient, and follow this two-step procedure:

1. *Subcutaneous infiltration with the microcannula:* In order to introduce the microcannula into the skin, we first need to make an entry point hole (Figure 2). I make this entry point with a 25 or 27 gauge needle after raising a superficial wheal with the anesthetic using a 30 gauge needle. I then introduce the cannula gently into the subcutaneous tissue level, injecting the anesthetic solution when moving along. This process is virtually painless since the blunt microcannula does not traumatize tissue as a sharp needle would. Because the length of the cannula is 5cm, I again raise a wheal at approximately every 5-6 centimeters and introduce the microcannula for more field infiltration. In the donor area, I normally introduce 6ml of anesthetic solution for each entry point of the microcannula. For example, in a 25cm×1cm-long strip, I use the microcannula to inject approximately 30ml of lidocaine 0.25% with epinephrine 1/200.000.

Figure 2. An entry point in the skin is made with a 20 gauge needle for the insertion of the microcannula.

2. *Superficial (dermal infiltration) with 30 gauge 1ml Luer-lock syringe:* I have noticed that though a deep subcutaneous infiltration with a large diluted volume of lidocaine via the microcannula provides a very long lasting anesthesia effect, the onset was not as rapid as a superficial dermal injection (Figure 3). For this reason, after I perform the subcutaneous infiltration with the microcannula, I immediately inject a small volume of the same anesthetic solution into the more

Figure 3. The donor area in hair transplantation is anesthetized with the microcannula. The injection of the anesthetic solution with the blunt microcannula takes place at the subcutaneous tissue level.

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Message from the 2012 Surgical Assistants Program Chair

Brandi Burgess *Charlotte, North Carolina, USA* bburgess@haircenter.com

Hello All. I would like to start off my first message as Chair for the Assistants Auxiliary with a huge congratulation to Margaret Dieta on a successful program this year in Anchorage (see photos). A big THANKS goes to everyone who helped in some way! It truly makes me realize what a close "family" this Society really is.

I am not sure if all of you know me, but I am Dr. Jerry Cooley's hair transplant supervisor in Charlotte, North Carolina. I have been in this field for over 12 years and counting! I have been an active member of the ISHRS since 2002, and have the privilege to follow in some very impressive footsteps!

I am very excited about the venue for our meeting next year. While Alaska was sincerely breathtaking, it will be wonderful to have a week in a warm, bright, sunny atmosphere. The dates for our 20th annual meeting are October 17-21, 2012, so please mark your calendar now.

Next year's program will be formatted similar to the Anchorage meeting and workshop. Our Surgical Assistants Program will be on Wednesday, preceding the main General Sessions, which will begin on Thursday morning. Our plans for this meeting are still being formed. We are working to come up with a hands-on workshop, although we will not have live tissue. I feel that our learning and sharing techniques can be explored and successfully enhanced with some innovative thinking. I would like to extend an invitation for suggestions for how we can make this one of the most exciting and productive programs yet! Please e-mail me directly at bburgess@haircenter.com.◆

How I Do It

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superficial dermal layer using a 1ml Luer-lock syringe and a 30 gauge needle (about 1ml per every 5cm of donor strip length).

Using the same procedure, I anesthetize the recipient area: first the painless subcutaneous infiltration with the microcannula for long lasting anesthesia, followed by the superficial dermal infiltration for immediate effect. Subsequently, I do not find it necessary to use supraorbital blocks. The total amount of anesthetic solution infiltrated in the frontal hairline field block is about 20-25cc with the microcannula and 4cc with the superficial infiltration.

The Anesthetic Solution

At the subcutaneous level, I use a large volume of diluted lidocaine with concentrations similar to Dr. Gillespie's recommendation in his chapter on Tumescent Anesthesia in Hair Transplantation, recently published in Unger's textbook.[1] 30cc of lidocaine 1% and 0.6cc of epinephrine 1/1000 are mixed with 90cc of saline resulting in a solution of 0.25% lidocaine with 1/200.000 epinephrine. The total lidocaine dose of this solution is 300mg, well below the maximum recommended daily dose of lidocaine with epinephrine, which is 500mg (7 mg/kg). The same solution is used for dermal and subcutaneous infiltration in both the donor and recipient area

Since I began using the microcannula, I have stopped using bupivacaine. On many occasions, I do not find necessary to even use saline tumescence, since the deep infiltration with the microcannula also provides considerable tumescence.

Discussion

In summary, the main advantages to using the fine caliber blunt microcannula are the almost painless infiltration of the anesthetic solution and a longer lasting effect. An additional advantage is the reduced risk of intra-arterial injection of the anesthetic.

Reference

1. Gillespie, J. Tumescent anesthesia in hair transplantation. In: W.P. Unger, R. Shapiro, R. Unger, and M. Unger, eds. *Hair Transplantation,* 5th edition. Informa healthcare, 2011, pp. 235-237.◆

Surgical Assistants Corner

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Whether you're a seasoned veteran hair technician who has worked with numerous physicians in numerous facilities or just beginning and working with a physician new to the hair transplant field, we can all add new twists to an old technique or old techniques to a new twist. I believe the best ideas are measured by how quickly they can be applied and how they improve either quality or efficiency, or both. I know each of us can contribute at least one technique or a pearl employed in our office that all of us can appreciate and utilize.

Container method for graft preparation makes it easy to count and place

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As faculty, I have served for two years working on the ISHRS Surgical Assistants workshops and I have been lucky enough to observe numerous techniques for graft preparation and slivering and placing that have been shared by some of our most experienced assistants. There have been a number of approaches and debates on such issues as skinny vs. chubby grafts, big slivers vs. thin slivers, placing with implanters vs. placing by forceps, and there will be more in the future as new approaches are demonstrated. These debates are important and lead to the fabulous pearls of knowledge that are often shared at the meetings.

Below, I present a pearl from our practice on what we refer to as the container method of graft preparation and placement and is based on our clinical experiences. Between different methods used in other clinics for graft cutting, storage, counting, or placement, this is a modified approach that we find to be most effective.

To begin, we cut white fabric sheeting tissue into squares of approximately 3cm×3cm (area: 9cm^2), which we refer to as "containers." The squares are sterilized in autoclave together with other instrumentation for every surgery. Containers are placed in Petri dishes according to type, for example, 1-, 2-, or 3-hair grafts in each, and soaked in storing solution (Figure 1). On average, 50 grafts per container are stored during the graft cutting process in rows of 15-19 grafts each (Figures 2 and 3). The advantages are as follows:

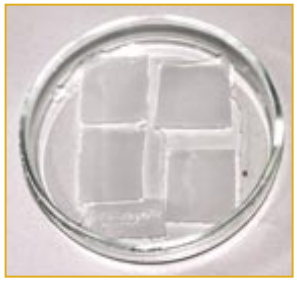

Figure 1. Containers are placed in a Petri dish with graft storing solution.

Figure 2. Grafts are placed on 3cm×3cm containers in rows of 1-, 2-, or 3-hair grafts.

1. The container method for graft storage makes it easier to count prepared grafts by multiplying the number of containers by the number of grafts placed in each container, avoiding the complicated counting process one-by-one and selection between 1-, 2-, and 3-hair grafts.
2. This method also makes it easy for the surgeon to count the percentage between prepared 1-, 2-, and 3-hair grafts.
3. The surgeon is able to monitor working quality of each assistant more effectively.
4. Placers take from one container during placing (50 in each), and because grafts are placed in containers in very clear rows, the process of placing becomes more efficient and less time consuming.

Figure 3. Close-up of container holding 3-hair grafts.

5. Placers are able to adjust the direction of bulbs and shafts of the group of 50 grafts at the same time on the gloves according to their need, taking into account the side on which they are placing—left, right, whiskers, or crown—ensuring a more effective grasping process (Figure 4).

Figure 4. Containers are placed on the gloves of placers allowing for different directions for different side placers.

6. Because the containers are chilled and wet with storing solution, there is less chance of the grafts dehydrating compared to methods in which grafts are placed directly on gloves or recipient areas.
7. On average, each container is fully placed by assistants within 3-4 minutes, and during this time grafts are continuously hydrated. ◆

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Date(s)	Event/Venue	Sponsoring Organization(s)	Contact Information
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January 2012	International European Diploma for Hair Restoration Surgery	*Coordinator:* Y. Crassas, MD, University Claude Bernard of Lyon, Paris, Dijon (France), Torino (Italy), Barcelona (Spain). Department of Plastic Surgery *www.univ-lyon1.fr*	For instructions to make an inscription or for questions: Yves Crassas, MD *yves.crassas@wanadoo.fr*
April 18-21, 2012	18th Annual Live Surgery Workshop ISHRS Regional Workshop *Orlando, Florida, USA*	International Society of Hair Restoration Surgery Hosted by Matt L. Leavitt, DO Clinic Sponsor: Bosley	Valarie Montalbano, Coordinator 407-373-0700 ext. 103 *hvalariem@leavittmgt.com*
May 11-13, 2012	2nd Annual Scientific Meeting of the AAHRS *Seoul, Korea*	Asian Association of Hair Restoration Surgeons *www.aahrs.asia/c02/c02_01.php*	Tel: 82-2-545-5824 Fax: 82-2-545-5829 *aahrs2010@gmail.com*
May 24-27, 2012	XIV International Congress of the ISHR *Rome, Italy*	Italian Society for Hair Restoration *www.ishr2012.com/*	To Come
June 21-23, 2012	16th Annual Meeting of the European Hair Research Society *Barcelona, Spain*	European Hair Research Society *www.ehrs.org*	Elena Lagalante Tel: 00 34 607 260 684 Fax: 00 34 93 212 09 70 *e.lagalante@gmail.com*
October 17-21, 2012	20th Annual Scientific Meeting of the International Society of Hair Restoration Surgery *Paradise Island, Bahamas*	International Society of Hair Restoration Surgery *www.ISHRS.org*	Tel: 630-262-5399 Fax: 630-262-1520
November 16-18, 2012	4th Annual Hair Restoration Surgery Cadaver Workshop *St. Louis, Missouri, USA*	Practical Anatomy & Surgical Education (PASE), Center for Anatomical Science and Education, Saint Louis University School of Medicine In collaboration with the International Society of Hair Restoration Surgery *http://pa.slu.edu*	*http://pa.slu.edu*
May 4-6, 2013	7th World Congress for Hair Research *Edinburgh, Scotland*	European Hair Research Society *www.ehrs.org*	*hair2013@meetingmakers.co.uk*

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October 17-21, 2012
Paradise Island, Bahamas

2013: 21st ASM
October 23-27, 2013
San Francisco, California, USA