Hair Transplant Forum International
Volume 19, Number 3

Hair Transplant Forum International is published bi-monthly by the International Society of Hair Restoration Surgery, 303 West State Street, Geneva, IL 60134. First class postage paid at Chicago, IL and additional mailing offices. POSTMASTER: Send address changes to *Hair Transplant Forum International*, International Society of Hair Restoration Surgery, 303 West State Street, Geneva, IL 60134. Telephone: 630-262-5399, U.S. Domestic Toll Free: 800-444-2737; Fax: 630-262-1520.

President's Message

William M. Parsley, MD *Louisville, Kentucky*

The time is drawing near for our 17th Annual Scientific Meeting of the International Society of Hair Restoration Surgery. Ken Washenik has spent nearly a full year preparing a program and speaker list that will maximize the educational value for the meeting. Our annual meetings are the centerpiece of our educational activities, and this year's is no exception. It not only is an extraordinary education program, but it is a great opportunity to interact with your colleagues from around the world. Personally, I learn almost as much from the doctors and assistants in the hallways as I do in the meetings.

Amsterdam is a beautiful city and this is a perfect opportunity to visit. The weather should be perfect and several outdoor events are being held. Because of the size of our meeting, we were able to secure special meeting rates at several hotels—NH Grand Hotel Krasnapolsky, the Park Plaza Victoria, and the Hilton Amsterdam. The NH Krasnapolsky, a 5 Star hotel, is a famous historic building over 140 years old. It is located at bustling Dam Square, opposite the Royal Palace and in the centre of Amsterdam, near the Anne Frank House and the Van Gough museum. After a tough day of sightseeing, you may want to stop by the nearby Heineken Brewery. The Park Plaza Victoria is a breathtaking 4 Star deluxe grandiose hotel. It was built in 1890 and is located in heart of the shopping and business district. Its location on a canal adds to its beauty. The 5 Star Hilton Amsterdam is closer to the meeting site, the RAI Convention Centre. Those with good legs may choose to walk to the RAI. This hotel is not served by the tram system, but a bus or taxi will get you to the RAI. Also located on a canal, the Hilton is celebrating the 40-year anniversary of John Lennon and Yoko Ono's "bed-in for peace" where they spent their honeymoon, located in the hotel. It is within walking distance of the old city centre, the Rijks Museum, and the Van Gough Museum, but a little more distance from the top nightspots than the other hotels. In addition, there are numerous other hotels at which you may like to stay, including the Hotel Novotel Amsterdam, which is located closest to the RAI–5 minutes walking. There is also the NH Caransa Hotel on the Rembrandtplein (Rembrandt Square), a famous square that is a center for cafés and nightclubs with people singing. With luck, you might be able to hear Dr. John Gillespie, our most famous troubadour. So there are great choices for any personality.

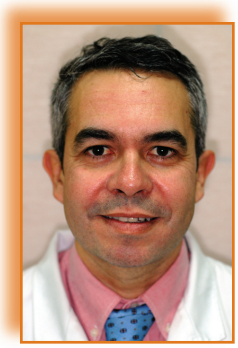
In addition to a great hotel selection, the ISHRS has a great social lineup. An opening Welcome Reception on Thursday will be held on The Beach at the RAI Convention Centre. An Annual Giving Fund Canal Cruise will be held on Friday. Trustee Circle and Leadership Circle–level contributors will be given 2 tickets; for others, tickets can be purchased along with a promise of no arm-twisting. The cruise embarks at the RAI so it will be very convenient, and disembarks at Leidesplein where there are many restaurants and bars. On Saturday we have arranged a "garden party" at the spectacular domed Koepelkerk, attached to the Renaissance Amsterdam Hotel. Surely, this has to be one of the most spectacular venues for our closing Gala.

All of these plans and educational activities certainly deserve the support of our members. The education, the beauty, the beautiful weather, the social events and meeting with colleagues should be a callout to every member to come to Amsterdam. Now is the time to make your reservations. You will be with friends.

Bill Parsley, MD

Co-editors' Messages

Paco Jimenez, MD *Las Palmas, Spain*



In this issue of the *Forum*, you'll find some new sections, including the reintroduction of The Dissector column, knowledgeably supervised by Dr. Russell Knudsen. This column will publish articles expressing personal opinions and arguments on a variety of topics. This month, Dr. Colin Westwood comments on trichophytic closure: Are we really achieving significantly better scars than before or is it merely an overhyped technique?

We are also introducing "How I Do It," edited by Dr. Bertram Ng. Modeled on a similar column in the *Journal of Dermatologic Surgery,* it will comprise a series of practical surgical tips to help make our lives easier. Instead of the classic format (abstract, material and methods, etc.), the articles will have a short introduction followed by a detailed description of the surgical pearl of wisdom, with plenty of good-quality photos. This month, Dr. McKenzie shows us a neat and effective way to mark the donor site.

In this issue are two original articles that deal with postoperative edema. Dr. Tommy Hwang presents a study that shows that because gravity is the main factor in postoperative edema, then the best means for its prevention is to maintain the head in a supine decubitus position for the first 48 hours as much as possible. Dr. Kongkiat Laorwong, et al. next discuss the risks and their protocol for prevention.

I also would like to recommend a careful reading of Dr. Jim Vogel's article on Hair Photography, which is full of recommendations and ideas.

Finally, Dr. Nilofer Farjo interviews Dr. Gill Westgate about the intriguing exogen phase of the hair cycle. Much confusion exists about the different terminology (exogen, kenogen, teloptosis) and Dr. Westage reviews these definitions and clarifies a lot of concepts.

Paco Jimenez, MD

Bernard Nusbaum, MD *Coral Gables, Florida*

I have always felt that performing hair restoration for women is extremely rewarding as women have always been among the most grateful patients. In addition, it fosters diversification of techniques within a hair practice. As hair loss practitioners, however, we sometimes share the frustration of our female pattern hair loss (FPHL) patients because of the limited array of effective medical treatments available. While randomized, placebo controlled trials have shown increased hair growth in FPHL with 2% and 5% minoxidil solution, results have been modest and patients may perceive that they could have picked up the bottle "off the shelf," without our expert opinion. The frustration grows, as no treatment for FPHL comes close to that seen with finasteride for male androgenetic alopecia. The science and art of evaluating and treating female hair loss, however, is quite interesting and professionally challenging. Physicians should seek to learn more and not turn away from treating these patients. Novel techniques have been developed to measure hair density and diameter to establish diagnoses as well as baseline values for monitoring treatment outcomes. Treatment alternatives such as low level laser therapy, oral contraceptives, antiandrogens, and finasteride, although controversial, need to be discussed and evaluated for efficacy and safety. Proper execution of hair transplant procedures, tailored specifically to FPHL, are extremely effective in properly selected patients. KNOWLEDGE IS POWER, and, in that regard, I encourage you to attend the Female Pattern Hair Loss Workshop being hosted by Jerzy Kolasinski in Poznan, Poland, July 17-19, preceding the Amsterdam meeting. With a world-renowned faculty, you will be exposed to a comprehensive review and will gain firsthand exposure to the latest technology in the field.

Bernard Nusbaum, MD

Editorial Guidelines for Submission and Acceptance of Articles for the *Forum* Publication:

1. Articles should be written with the intent of sharing scientific information with the purpose of progressing the art and science of hair restoration and benefiting patient outcomes.
2. If results are presented, the medical regimen or surgical techniques that were used to obtain the results should be disclosed in detail.
3. Articles submitted with the sole purpose of promotion or marketing will not be accepted.
4. Authors should acknowledge all funding sources that supported their work as well as any relevant corporate affiliation.
5. Trademarked names should not be used to refer to devices or techniques, when possible.
6. Although we encourage submission of articles that may only contain the author's opinion for the purpose of stimulating thought, the editors may present such articles to colleagues who are experts in the particular area in question, for the purpose of obtaining rebuttal opinions to be published alongside the original article. Occasionally, a manuscript might be sent to an external reviewer, who will judge the manuscript in a blinded fashion to make recommendations about its acceptance, further revision, or rejection.
7. Once the manuscript is accepted, it will be published as soon as possible, depending on space availability.
8. All manuscripts should be submitted to both **drnusbaum@yahoo.com** and **jimenezeditor@clinicadelpelo.com**
9. A completed Author Authorization and Release form—sent as a Word document (not a fax)—must accompany your submission. The form can be obtained in the Members Only section of the Society website at www.ishrs.org.
10. All photos and figures referred to in your article should be sent as separate attachments in JPEG or TIFF format. Be sure to attach your files to the email. Do ***NOT*** embed your files in the email or in the document itself (other than to show placement within the article).

Submission deadlines:
June 5 for July/August 2009 issue
August 5 for September/October 2009 issue
October 5 for November/December 2009 issue

Registration is open!

Register for the meeting and don't forget to make your hotel reservations.

All information can be found at:
www.ISHRS.org/17thAnnualMeeting.html

Meeting Newcomers Program

New This Year

This program is designed to help our newer ISHRS meeting attendees become acquainted with the Society, its members, and the meeting. "Newcomers" will be paired with volunteer member "hosts." All registration categories are welcome to participate.

Sign up for the Meeting Newcomers Program when you register for the meeting!

2008–09 Chairs of Committees

2009 Annual Scientific Meeting Committee: Kenneth J. Washenik, MD, PhD
Annual Giving Fund Chair: Matt L. Leavitt, DO
American Medical Association (AMA) Specialty & Service Society (SSS) Representative: Paul T. Rose, MD, JD
Audit Committee: Robert S. Haber, MD
Bylaws and Ethics Committee: Robert T. Leonard, Jr., DO
CME Committee: Paul C. Cotterill, MD
Core Curriculum Committee: Edwin S. Epstein, MD
Fellowship Training Committee: Vance W. Elliott, MD
Finance Committee: Jerry E. Cooley, MD
Hair Foundation Liaison: E. Antonio Mangubat, MD
Live Surgery Workshop Committee: Matt L. Leavitt, DO
Media Relations Committee: Robert T. Leonard, Jr., DO
Membership Committee: Marc A. Pomerantz, MD
Nominating Committee: Jennifer H. Martinick, MBBS
Past-Presidents Committee: Paul C. Cotterill, MD
Pro Bono Committee: David Perez-Meza MD
Scientific Research, Grants, & Awards Committee: Michael L. Beehner, MD
Surgical Assistants Executive Committee: Tina Lardner
Surgical Assistants Awards Committee: Cheryl J. Pomerantz, RN
Task Force on Hair Transplant CPT Codes: Robert S. Haber, MD
Website Committee: Ivan S. Cohen, MD
Ad Hoc Committee on Database of Transplantation Results on Patients with Cicatricial Alopecia: Nina Otberg, MD
Ad Hoc Committee on Feasibility of Product Endorsement: Jennifer H. Martinick, MBBS
Ad Hoc Committee on Regulatory Issues: Paul T. Rose, MD, JD
Evidence Based Medicine (EBM) Task Force: Sharon A. Keene, MD

2008–09 Board of Governors

President: William M. Parsley, MD*
Vice President: Edwin S. Epstein, MD*
Secretary: Jennifer H. Martinick, MBBS*
Treasurer: Jerry E. Cooley, MD*
Immediate Past-President: Bessam K. Farjo, MBChB*
Michael L. Beehner, MD
Vincenzo Gambino, MD
John D. N. Gillespie, MD
Sharon A. Keene, MD
Jerzy R. Kolasinski, MD, PhD
E. Antonio Mangubat, MD
Bernard P. Nusbaum, MD
Damkerng Pathomvanich, MD
Carlos J. Puig, DO
Paul T. Rose, MD, JD
Surgical Assistants Representative: MaryAnn W. Parsley, RN

*Executive Committee

INTERNATIONAL SOCIETY OF ISHRS HAIR RESTORATION SURGERY

Gravity position

from front page

The severity of swelling was evaluated daily from the day following surgery to day 7. The resulting edema was classified into four categories according to the following severity scale:

Grade 0: No swelling or swelling extending to 1cm under the anterior hairline
Grade I: Swelling extending to the mid-forehead
Grade II: Swelling extending to the lower forehead
Grade III: Swelling extending to the upper eyelid or eyelid bruising

The compliance of patients during the 1.5-day period was evaluated as follows:

Good: Remained in a supine, lateral decubitus posture and/or leaned backwards without head elevated more than 75% of the 1.5-day period

Average: Remained in a supine, lateral decubitus position and/or leaned backwards without head elevated between 50% and 75% of the 1.5-day period

Poor: Remained in the supine or lateral decubitus position and/or leaned backwards without head elevated less than 50% of the 1.5-day period

Results

The following are the results of the 1,200 participants in this study:

Severity of Edema

(Grade / Number of participants / Percentage)

Grade 0: 1,134 (94.5%)
Grade I: 55 (4.6%)
Grade II: 8 (0.7%)
Grade III: 3 (0.2%)

Patients' Compliance

(Level of Compliance / Number of participants / Percentage)

Good: 968 (80.7%)
Average: 190 (15.8%)
Poor: 42 (3.5%)

Most of the Good compliance group showed Grade 0. Those who developed Grade III edema were in the Poor compliance group. Therefore, these findings strongly support that the position of the head during the 1.5 days after surgery is very important to the prevention of facial swelling.

Discussion

Facial edema, or swelling, caused by the retention of normal amounts of tissue and fluid after hair transplantation begins on the second postoperative day, usually reaching a peak on the fourth postoperative day, and has usually resolved completely by the sixth or seventh postoperative day.[1] It inhibits patients returning to society or the workplace quickly, and they have to incur the expense of longer leaves or holidays. Neighbors can notice the patient received hair surgery. So prevention of edema is very important to both patients and doctors.

Perioperative and postoperative steroids have been found to reduce the incidence and degree of postoperative edema after head and neck surgery.[2-4] Dr. Norwood claims to have reduced his incidence of postoperative swelling from 20% to less than 5% by using systemic corticosteroids and adding 50mg of triamcinolone acetonide to 50 mL of lidocaine (1mg/mL) for operative anesthesia.[5] However, even with the use of cortisone doses at the upper limits, there is often some minor swelling and rarely there is considerable swelling. There are also complications after steroid use. Dr. Arnold reported the occurrence of a folliculitis-like reaction that occurred at injection sites after the addition of triamcinolone acetonide to lidocaine.[6] Other inevitable limitations to steroid use include that many athletes cannot take steroids because of drug screening. We must also be careful administering steroids for immunocompromised patients such as those with diabetes mellitus.

Therefore, other methods are necessary. Besides steroids, postoperative edema can also be reduced through physical methods such as the use of a turban-style wrap, compression tape below the hairline, an ice pack, and leaning the head back to a 45-degree elevation.[7] It is known that elevation reduces venous and lymphatic pressure and is, therefore, advantageous. Most surgeons recommend that the patient elevate the upper body to at least 45 degrees for the first 24 hours after the transplant. Unfortunately, there is no way of predicting which patients will experience edema or the degree of swelling. Once edema has begun, steroid, ice packs, and other physical methods have little effect. Therefore, prevention is the best treatment.

I personally met several dentists who experienced severe forehead and upper eyelid swelling after hair transplantation even though they made use of steroids and various physical methods. They all had one thing in common: They inclined their heads while they worked. It seems that lymphatic fluid accumulates in the frontal scalp, forehead, and upper eyelids due to the same reason an apple falls to the ground: GRAVITY. Therefore, I designed this study to evaluate whether the head position had an effect on the prevention of facial swelling. Patients were instructed to keep a supine or lateral decubitus position or to lean their head backwards to the point where the head was parallel to the ground, looking straight up at the ceiling whenever possible for 1.5 days after surgery. This is in contrast to the normal 45-degree elevation of the head. I will henceforth refer to this ideal position, with the face parallel to the floor and ceiling, as the "gravity position." Normal activities

page 82

Table 1. Comparison of Severity of Facial Edema According to the Patient's Compliance

Patient's Compliance	Severity of Edema (Number of Patients [%])				Total
	Grade 0	Grade I	Grade II	Grade III	
Good	940 (97.1)	28 (2.9)	—	—	968 (80.7)
Average	176 (92.6)	13 (6.9)	1 (0.5)	—	190 (15.8)
Poor	18 (42.9)	14 (33.3)	7 (16.7)	3 (7.1)	42 (3.5)
Total	1,134 (94.5)	55 (4.6)	8 (0.7)	3 (0.2)	1,200 (100)

Gravity position

⇦ from page 81

such as eating, going to the bathroom, and visiting the clinic for shampoo treatments were permitted. Because it moves very slowly, it takes at least 1 or 2 days for the lymphatic fluid to move from the frontal scalp to the mid-forehead. I designed this gravity position to be practiced for only 1.5 days so the lymphatic fluid could accumulate in the crown or parietal scalp. Then from the second postoperative day, normal activities were permitted, including sitting with the head elevated, but with the exception of lying in a prone position; thus using gravity to move lymphatic fluid well to the lower occipital scalp.

Of the 1,200 patients, 80.7% fell into the category of Good compliance, 15.8% Average, and 3.5% Poor. So, because the compliance was excellent, it seems to follow that it is not difficult to remain comfortably in the gravity position. According to the results, the Good compliance group showed minimal ojr no swelling, but a quarter of the Poor compliance group showed severe forehead and upper eyelid swelling. Therefore, it seems that this "gravity position" diverts lymphatic flow from the transplanted area toward the occipital or temporo-parietal scalp and results in less or no swelling in the forehead or upper eyelids.

There may be some controversy regarding what is the ideal position to prevent facial edema: traditional head elevation at a 45-degree angle or this author's gravity position. It has been known that traditional head elevation at a 45-degree angle has an effect on the prevention of facial edema. Dr. Abbasi also reported Grade II postoperative edema in 86% of patients who slept at a 45-degree angle without steroid use and Grade III postoperative edema in 86% of patients who spent much time in a vertical position without steroid use.[8] So, it can be concluded that head elevation at a 45-degree angle can make lymphatic fluid move to forehead due to gravity.

The relationship between shingle point and anterior hairline is important to consider. If the anterior hairline is much superior to the shingle point (Figure 2), head elevation at a slight degree cannot cause lymphatic fluid to move to the forehead. However, if the anterior hairline is inferior to the shingle point or around the shingle point (Figure 3), a slight head elevation or 45-degree angle may still greatly allow the lymphatic fluid's movement to the forehead due to gravity, resulting in forehead swelling.

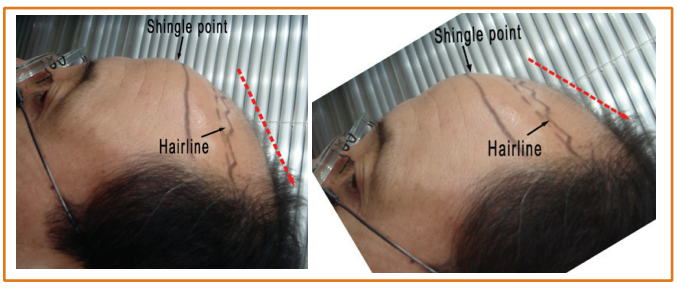


Figure 2. If the anterior hairline is much superior to the shingle point, head elevation at a slight degree cannot cause lymphatic fluid to move to the forehead. The red arrow indicates the movement of lymphatic fluid.

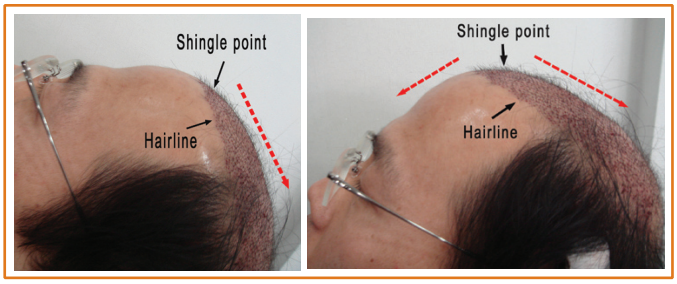


Figure 3. If the anterior hairline is inferior to the shingle point or around the shingle point, slight head elevation can allow the lymphatic fluid's movement to the forehead due to gravity. The red arrow indicates the movement of lymphatic fluid.

Conclusion

The traditional steroid use and other physical methods were known to be effective in the prevention of postoperative edema. But this author's gravity position—keeping a supine or lateral decubitus position or leaning the head backward to a level parallel to the floor whenever possible for the first 1.5 days after surgery—is also an excellent method to prevent forehead edema after hair transplantation.

References

1. Parsley, W. Management of the postoperative period. In: W.P. Unger and R. Shapiro, eds. Hair Transplantation. 4th ed. New York: Marcel Dekker, 2004; 555-568.
2. Owsle, Y.J., T.J. Weibel, and W.A. Adams. Does steroid medication reduce facial edema? *Plast Reconstr Surg.* 1996; 98(1):1-6.
3. Neil-Dwyer, J.G., et al. Tumescent steroid infiltration to reduce postoperative swelling after craniofacial surgery. *Br J Plast Surg.* 2001; 54(70):565-569.
4. Nordstrom, R.E., and R.M. Nordstrom. The effect of corticosteroids on postoperative edema. In: W. Unger and R. Nordstrom, eds. Hair Transplantation. New York: Marcel Dekker, 1988; 391-394.
5. Norwood, O.T. Say goodbye post-operative edema. *Hair Transplant Forum Int'l.* 1994; 4(1):13.
6. Seager, D.J. Pain control and management of the postoperative period. In: D. Stough, ed. Hair Replacement: Surgical and Medical. Mosby: Year Book, 1996; 105-110.
7. Neidel, F.G. Preventing post-operation swelling. *Hair Transplant Forum Int'l.* 2003; 13(3):50.
8. Abbasi, G. Hair transplantation without postoperative edema. *Hair Transplant Forum Int'l.* 2005; 15(5):149, 158.✧