FOLÍCULO

ISSUE 34 AUGUST 2025



OFFICIAL JOURNAL OF THE

Associação Brasileira de Cirurgia da Restauração Capilar

TRICHOLOGY DISCUSSES FFA

Dr. Marcela de Lima Vidal brings a therapeutic approach to the condition

ORAL MINOXIDIL

What are the complications? Dr. Leila David Bloch analyzes

CT AND FRONTOPLASTY

Dr. Rafael Reinert presents case of a female patient

Contents





04 **EDITORIAL**
ABCRC presents another copy of **O FOLÍCULO**, to be read and enjoyed as a rich collection of articles on hair restoration and trichology

06 **EVENT COVERAGE**
Dr. Marta Zollinger gives details of the 8th World FUE Institute Meeting, held in São Paulo





11 **CURRENT ARTICLES**
Dr. Larissa Belarmino discusses MPC inhibitors and hair regeneration, with an introduction by Dr. Flávia Rodrigues Dias

13 **CLASSIC ARTICLES**
Hair transplant to correct rhytidoplasty stigmas



23 **LEGAL**
Dr. Gustavo Graça Mercadante examines the defense of professionals in compensation lawsuits filed by patients



24 **TRICHOLOGY**
Therapeutic approach to Frontal Fibrosing Alopecia is the topic of the article by Dr. Marcela de Lima Vidal



26 **COMPLICATIONS**
Dr. Leila David Bloch discusses the complications of using oral Minoxidil; Dr. Solon Eduardo gives the presentation



30 **RICARDO LEMOS FORUM**
On May 20, 2025, the first edition of Sala Ricardo Lemos of the year took place, an already established bimonthly meeting of ABCRC



31 **ARTICLE**
Dr. Rafael Reinert presents a case of hair transplant and frontoplasty in a woman with fibrosing alopecia



34 **MARKETING**
Dr. Márcio André Volkweis continues the previous article and discusses in this edition one of the Ps of marketing: promotion/advertising



38 **CHRONICLE**
Why is writing about “baldness” always popular? Dr. Carlos Eduardo Leão addresses the issue, with a warning at the end of the text

Editorial



Dra. Marta Zollinger
CRM 9999
RQE 2876



Dr. Henrique Radwanski
CRM 496249 - RJ
RQE 6539

The ABCRC presents another copy of **O FOLÍCULO**, to be read and enjoyed as a rich collection of articles on hair restoration and trichology. A variety of topics are presented, demonstrating the broad spectrum that our specialty embraces.

Rafael Reinert reports his experience in hair transplant associated with frontoplasty in a patient with fibrosing alopecia, with excellent results. Young Larissa Belarmino, a student in our 2nd Training Course, discusses mitochondrial pyruvate transporter (MPC) inhibitors and hair regeneration, an article commented on by Flávia Rodrigues Dias, coordinator of the Current Articles Column.

In the Trichology section, Marcela de Lima Vidal discusses therapy for Fibrosing Frontal Alopecia (FFA). In the Complications Column, coordinated by Sólon Eduardo Souza, Leila Bloch writes about all the possible complications of using oral Minoxidil, which is so widely prescribed these days.

The correction of post-lifting stigmata, by Henrique Radwanski, is the article in the Classic Articles column. Márcio Volkweis discusses interesting aspects about marketing and advertising, emphasizing the difference between these two concepts, and Gustavo Mercadante explains how surgeons can defend themselves in damages brought by their patients. Recent events are summarized by the co-editor of **O FOLÍCULO**, Marta Zollinger. Finally, Carlos Eduardo Leão entertains us with the motto: “Bald men of the world, unite!”

Enjoy your reading and invite associates to contribute their ideas and experiences!

Henrique Radwanski,
Maria Marta Zollinger
Editors O FOLÍCULO

Credits:

The Brazilian Association of Hair Restoration Surgery (ABCRC) is a nonprofit association composed of doctors Dermatologists and/or plastic surgeons who perform hair restoration surgery.

Board of Directors 2025-2026

Brazilian CEO
Dra. Anna Cecília Andriolo

Vice President
Dra. Maria Marta Mattos Zollinger

First Secretary
Dra. Maria Angélica Muricy Sanseverino

Head Treasurer
Dr. Márcio André Volkweis

Assistant Treasurer
Dr. Antônio José Ruston

Former CEOs

Dr. Henrique Radwanski
2023/2024

Dr. Francisco Le Voci
2021/2022

Dr. Carlos Eduardo Guimarães Leão
2019/2020

Dr. Mauro de Medeiros Speranzini
2017/2018

Dr. José Candido Muricy
2015/2016

Dr. Ricardo Gomes de Lemos
2013/2014

Dr. Fernando Teixeira Basto Junior
2011/2012

Dr. Marcelo Pitchon
2009/2010

Dr. Isaias Marcelo Gandelman
2003/2004 - 2005/2006 - 2007/2008

O Folículo

A quarterly publication of the ABCRC, launched in 2014. The mission of "O Folículo" is to promote the dissemination of high-quality scientific knowledge, encourage debate and innovation in hair transplantation.

General Editors
Dra. Marta Zollinger
Dr. Henrique Radwanski

Writing and editing/Responsible journalist
Lilian Mallagoli - MTb 30.443

Art direction and layout:
Activa Design

Associação Brasileira de Cirurgia da Restauração Capilar

Associação Brasileira de Cirurgia da Restauração Capilar (ABCRC)
Av. Pres. Getúlio Vargas, 4089 - Água Verde
CEP: 80240-041 - Curitiba - PR
secretaria@abcrc.com.br
(11) 99920-9080

ABCRC at the 8th World FUE Institute Meeting in São Paulo



Dr. Marta Zollinger, vice-president of ABCRC CRM 9999 RQE 2876

Once again, Brazil stands out as a stage for major scientific events in the area of hair transplant. This time, it was in São Paulo, at the Tivoli Mofarrej Hotel, from April 23 to 26, that the 8th World FUE Institute Meeting took place.

There were three days with live surgeries and presentations of important topics, in which relevant issues that raise doubts and controversies were addressed.

The discussions were extremely fruitful, bringing important contributions to the participants' learning. We had the opportunity to learn about the approach and opinion of the great icons on various issues within Hair Transplant and Trichology.

BRAZILIAN AND INTERNATIONAL SPEAKERS WERE THE STARS

On the first day, we had two rooms with simultaneous activities.

In one room, the basic course was presented under the coordination of Dr. Maira Merlotto and Emanuele Morello, and the other was focused on Trichology with a focus on Trichoscopy and clinical treatments, under the baton of Dr. Anna Cecília Andriollo.

On this day, general and more specific concepts aimed at beginners in Hair Transplant were covered.

OPENING OF CONGRESS AND FIRST DISCUSSIONS

The Congress was opened by its President, Dr. Emorance Lupanzula, and Dr. Antonio Ruston and Dr. Ron Shapiro, scientific directors.

Participants received a varied program with general sessions on topics such as donor area care and calculations, minimally invasive treatments, surgical planning with long-term results, among many others.

Some controversial topics were discussed, including the oral use of Minoxidil and 5α-reductase inhibitors, efficacy, side effects, indications and complications, which generated a lot of interest in the audience.

We had presentations explaining various technologies for ex-







tracting follicular units - how they work and their advantages.

Discussions were also presented regarding gigasessions: the limits and what is actually possible to do. Highlights are the video sessions with surgical demonstrations of excellence.

After each stage, a quiz was distributed, one of the highlights, with a debate about the panel presented, bringing the interaction and participation of the audience.

EMBLEMATIC CASE AND LUNCH WITH EXPERTS

We started the second day with the surgical steps being demonstrated on models by very experienced surgeons.

Highlights included:

- Discussion of the surgical plan in all details and how to execute the drawings and lines in the main procedures;
- Great focus on how to correct unsightly results (repair surgeries), when we were treated to the presence of Dr. Ruston: the emblematic case of actor Paulo Vilhena;
- During lunch, it was possible to sit next to experts for an informal chat and ask questions of the speaker of your choice;
- We cannot forget the surgery of the moment: FUE Long Hair, with an exclusive session, in which non shaven, long hair and long afro hair were addressed.

LIVE SURGERIES

The last day of the event was dedicated to live surgeries, with four demonstrations carried out at the Ruston Clinic:

- **Case 1** - Shaved FUE and long hair on the same patient. Extraction and implantation carried out by two different surgeons at each stage, using different technologies, in which comparisons were made of some important criteria for the result.
- **Case 2** - reconstructive surgery. Patient with exhausted donor area. It was shown how to homogenize it and correct the hairline with the demonstration of different technologies on the same patient.
- **Case 3** - Eyebrow transplant performed by two surgeons.
- **Case 4** - SMP.





FROM CAPOEIRA TO ELVIS PRESLEY

Everyone actively participated in the social programs! At the opening, there was a show with samba and capoeira artists to keep everyone entertained.

On Friday, an unmissable gastronomic experience, especially for foreigners: barbecue at the Fogo de Chão restaurant. On Saturday, there was a beautiful closing party with a gala dinner, teacher awards and lots of music, with an Elvis Presley cover show, represented by Dr. Ruston.

This was a brief summary of this famous Congress, a leading annual event in the hair restoration calendar!


















#WFISAOPAULO
worldfue institute
SÃO PAULO
APRIL 23 TO 26 - 2025
BRAZIL
BRASIL






SÃO PAULO
BRAZIL



MPC inhibitors and hair regeneration: a new therapeutic path for androgenetic alopecia?



With an introduction by
Dr. Flávia Rodrigues Dias
Dermatologist specializing in Hair Transplant; Full Member of SBD, ABCRC and ISHRS; currently in a trichology fellowship in Australia
CRM SP 166070
RQE 77795



Dr. Larissa Belarmino
Dermatologist; Full Member of SBD and ABCRC
CRM RJ: 5201058630
RQE:42735

INTRODUCTION

Androgenetic alopecia remains a therapeutic challenge, especially in refractory cases. Recent advances highlight the role of cellular metabolism in regulating the hair cycle, with mitochondrial pyruvate transporter (MPC) inhibitors emerging as a promising approach for stimulating follicular stem cells. Although preclinical studies point to potential for hair regeneration, more robust clinical studies are still needed to confirm its efficacy and safety in humans.

Mitochondrial pyruvate transporter (MPC) inhibitors have emerged as a promising therapeutic strategy for several conditions, including hair-related disorders. MPC is a protein complex that crosses the inner mitochondrial membrane and transports pyruvate from the cytoplasm into the mitochondria, where it will be oxidized to generate energy. Inhibition of this transporter causes a notable change in cellular metabolism, redirecting pyruvate for conversion to lactate in the cytoplasm, mediated by increased lactate dehydrogenase (LDH) activity. This metabolic deviation activates follicular stem cells, promoting their proliferation and stimulating the start of a new phase of hair growth[1-3].

In murine models of alopecia induced by aging, stress, or chemotherapy, Flores et al. demonstrated that pharmacological inhibition of MPC significantly accelerates the hair cycle. Blocking pyruvate entry into mitochondria promotes a metabolic stimulus that rapidly reverts follicles from the telogen phase to the anagen phase, resulting in histologically normal follicles within 30 to 40 days, without apparent toxicity[2].

Liu et al. investigated derivatives of the classic MPC inhibitor, UK5099, and observed that the compounds developed significantly increased LDH activity and stimulated hair follicle stem cell proliferation. Several molecules presented therapeutic potential, reinforcing the hypothesis that the metabolic activation of stem cells represents an effective approach for the treatment of alopecia[3].



The PP405 molecule was recently mentioned in clinical studies as a promising substance for hair regeneration. Although official press releases from Pelage Pharmaceuticals do not explicitly identify its action as an MPC inhibitor, they highlight its potential to reactivate follicular stem cells via metabolic mechanisms. The phase 2a clinical study conducted by Pelage Pharmaceuticals, a Regenerative Medicine company, is ongoing at multiple centers in the United States and investigates the topical use of PP405 in 60 patients with androgenetic alopecia [4]. The company reports that the preclinical results demonstrated stem cell activation and a good safety profile, although the clinical efficacy results have not yet been officially released[4].

These initial findings place MPC inhibitors as an innovative approach in the treatment of androgenetic alopecia, mainly because of their direct action on follicular stem cells. These agents inaugurate a probable future therapeutic class with potential benefits for patients with extensive or refractory hair loss.

It should be noted that the most recent study conducted by Pye et al . demonstrated that the inhibition of MPC with the UK5099 molecule induces metabolic stress and activates the integrated stress response in human hair follicles, leading to the interruption of the cell cycle. These findings contrast with those obtained in murine models, where MPC inhibition resulted in stem cell activation. Prolonged activation of ISR was associated with suppression of hair growth, suggesting that modulation of MPC requires caution and strict control of dose and exposure time[5].

Although MPC inhibitors represent a promising future avenue for the treatment of alopecia, further studies are needed to elucidate their mechanisms, determine their safety, and compare them with other established therapeutic approaches.

Currently, there are no approved drugs based on MPC inhibitors, and compounds such as UK5099 remain restricted to preclinical research. The most concrete breakthrough is the clinical trial of the PP405 molecule, which is still in its preliminary stages. These data reinforce that, although innovative, this therapeutic strategy requires rigorous validation before its incorporation into clinical practice.

References

1. Maram L, Michael JM, Politte H, Srirama V, Hadji A, Habibi M, et al. Advancing mitochondrial therapeutics: Synthesis and pharmacological evaluation of pyrazole-based inhibitors targeting the mitochondrial pyruvate carrier. Eur J Med Chem. 2024 Dec 11;283:117150.

2. Flores A, Choi S, Hsu YC, Lowry WE. Inhibition of pyruvate oxidation as a versatile stimulator of the hair cycle in models of alopecia. Exp Dermatol. 2021;30(4):448-56.

3. Liu X, Flores A, Situ L, Gu W, Ding H, Christofk HR, et al. Development of novel mitochondrial pyruvate carrier inhibitors to treat hair loss. J Med Chem. 2021;64(4):2046-63.

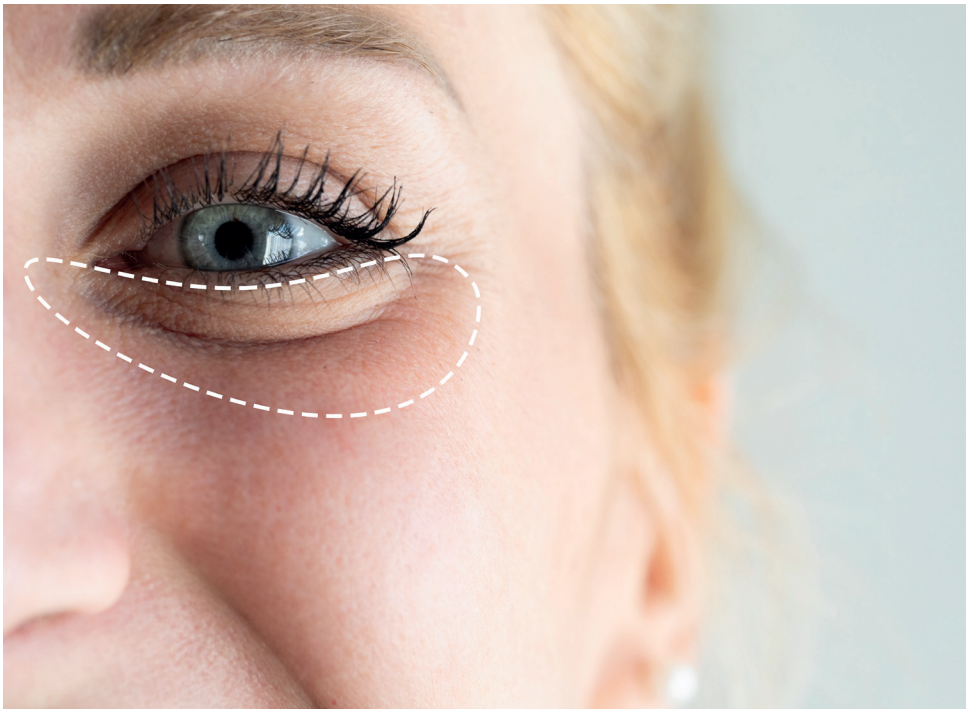
4. Pelage Pharmaceuticals. Pelage Pharmaceuticals advances clinical program with first patients dosed in Phase 2 study for hair loss and GV-led $14M Series A-1. PR Newswire. 2024 Aug 13. Available from: https://www.prnewswire.com/news-releases/pelage-pharmaceuticals-advances-clinical-program

5. Pye D, Scholey R, Ung S, Dawson M, Shahmalak A, Purba TS. Activation of the integrated stress response in human hair follicles. PLoS One. 2024;19(6):e0303742.

Hair transplant to correct rhytidoplasty stigmas



Dr. Henrique Radwanski
Former president of the ABCRC
CRM 496249 - RJ
RQE 6539



As a young instructor at the Ivo Pitanguy Clinic, starting in 1996, I became interested in hair restoration surgery for two reasons: there was a gap in Prof. Pitanguy, and I noticed a great diversity of situations that could be corrected by this procedure. Men with baldness undoubtedly made up the majority, but there were many cases of scalp repair surgery. Among these, one interesting condition stood out: women with face-lifting stigmata. As the CIP was a reference center for facial rejuvenation surgery, patients were frequently treated with two, three, or even more facial interventions. What signs could be corrected by follicular transplant? Excessive elevation of the temporal line (i.e., the rib), enlarged or poorly positioned pre-pyloric scars, the step in the cervical incision. These stigmas showed that rhytidoplasty had been performed, and many of these patients complained of these surgically acquired deformities.

With the constant encouragement of Prof. Pitanguy, I began to recommend and perform hair transplantation on these patients starting in the early 2000s. With



a sequence of clinical cases, I adopted a methodology, which was then incorporated into the CIP routine. The other assistants referred to these patients to me, which resulted in a unique sample compared to other plastic surgery centers. As a result, I was able to present this surgical technique at several plastic surgery events in Brazil and abroad. Fellow experts in hair restoration commented that my demonstration encouraged them to expand the recommendation for the procedure to similar cases.

I must emphasize that the first publication on the subject was authored by my colleague from Texas, Alfonso Barrera[1-2].

Carlos Uebel, a former student of the same service, was fundamental in mentoring my learning. An article he wrote served as a guide[3], and his Hair Transplant Course (Porto Alegre, 1995) served as my introduction to the world of hair restoration. In 2007, co-authored by Ivo Pitanguy, we published the article "Follicular Transplantation for the Correction of Various Stigmas After Rhytidoplasty" in the journal Aesthetic Plastic Surgery, summarizing CIP's experience over several years[4].

With the evolution of the surgical technique, I currently use only the extraction of follicular units (FUE), and the FUT procedure, in which the skin spindle was removed, is no longer necessary. I hope that the article will serve to broaden the vision of the plastic surgeon who, faced with an unfavorable result of a facelift, thinks about the possibility of restoring a natural hairline.

References

Barrera, A. The use of micrografts and minigrafts for the correction of the postrhytidectomy lost sideburn. Plast Reconstr Surg 102: 2237-2240, 1998.

Barrera, A. Correcting the retroauricular hairline deformity after facelift. Aesthet Surg J 24: 176-178, 2004.

Uebel, CO. Micrograft: A new approach for pattern baldness surgery. Transactions of the 10th International Congress of ISAPS, 1989.

Henrique N. Radwanski, Daniel Nunes, Flávio Nazima, Ivo Pitanguy. Follicular Transplantation for the Correction of Various Stigmas After Rhytidoplasty. Aesthet Plast Surg 31: 62-68, 2007.

Cosmetic Ideas and Innovations

The Use of Micrografts and Minigrafts for the Correction of the Postrhytidectomy Lost Sideburn

Alfonso Barrera, M.D.

Houston, Texas

Surgeons who perform rhytidectomy (face lift procedures) know that there are times when the upward displacement of the sideburn is greater than desired. The sideburn and temporal hairline are aesthetically essential features of the face. When there is a mild loss, it may go unnoticed; however, in some cases, it can be more severe, especially in secondary or tertiary procedures, resulting in a tell-tale deformity unique to rhytidectomy. These patients have great difficulty in styling their hair, and they lose the freedom to style their hair upwards or back. To correct this deformity, the hair must be restored. Punch grafts, various scalp flaps, free scalp flaps, and scalp tissue expansion have been described as ways of doing so.[1–7]

In an effort to obtain a result that is as natural as possible with a minimum of scarring and down time, I use micrografts (grafts with one or two hairs) and minigrafts (grafts with three to four hairs). The technique is basically the same as the one previously described for the treatment of male-pattern baldness[8–11]; the main difference is the direction and angulation of the graft insertion, which provides a more natural sideburn and temporal hairline.

Technique

In our office surgical suite, with the patient in the supine position, intravenous sedation is administered with midazolam and fentanyl. Nerve blocks to the occipital and auriculotemporal nerves are performed with 0.5 percent bupivacaine and epinephrine 1:200,000 (about 30 cc). Then, tumescent infiltration with 0.25% lidocaine 1:200,000 is done in both the donor and the recipient sites as needed (about 60 cc).

A horizontal ellipse is harvested from the occipital area. It usually measures 4 to 5 × 1 to 1.5 cm, depending on the number of grafts we expect to be required. The donor site is closed primarily with a single layer of simple running 3-0 Prolene sutures. The grafts are then prepared with Personna preparation blades (American Safety Razor Company, Verona, Va.) and no. 22 blades. The proposed new anterior temporal hairline and sideburn are marked in ink, and we then insert the micrografts and minigrafts as close as possible, about 1.5 mm, to each other.

Slits are created in the areas of hair loss with a Feather no. 11 Personna blade or a 65 Beaver miniblade. The blade must be inserted at a very acute downward angle in the same direction as a natural sideburn and the anterior temporal hair to obtain hair that will grow in that direction. There is no need for sutures in the recipient site. As the fibrinogen turns into fibrin, the grafts become secure enough.

For the first 48 hours, a dressing is applied consisting of adaptic, kerlix and a 3-inch elastic bandage. After that, the patient is allowed to shampoo gently. We prescribe 500 mg of cephalexin to be taken orally, four times a day,

From the West Houston Plastic Surgery Clinic, P.A. Received for publication April 27, 1998.

Abstract presented at the Annual Meeting of the American Society of Plastic and Reconstructive Surgeons, Boston, Massachusetts, October 1998.

Aesth. Plast. Surg. 31:62–68, 2007
DOI: 10.1007/s00266-006-0141-5

Aesthetic Plastic Surgery

© 2007 Springer Science+Business Media, Inc.

Follicular Transplantation for the Correction of Various Stigmas After Rhytidoplasty

Henrique N. Radwanski, M.D.,[1,2,3] Daniel Nunes, M.D.,[1,2,3] Flávio Nazima, M.D.,[1,2,3] and Ivo Pitanguy, M.D.[1,2,3]

[1]Department of Plastic Surgery, Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil
[2]Department of Plastic Surgery, Carlos Chagas Institute of Postgraduate Medical Studies, Rua Dona Mariana 65, Rio de Janeiro, 22280-020, Brazil
[3]Ivo Pitanguy Institute, Rio de Janeiro, Brazil

Abstract.
Background: Rhytidoplasty may cause permanent and unwanted stigmas, such as dislocation of the temporal and cervical hairline. Widened scars inside the hairline may cause considerable social embarrassment. Furthermore, pretrichial incisions, even if well placed, may widen or become hypochromic, thus revealing that an aesthetic procedure has been performed. Various procedures for the correction of these undesirable telltale signs of a face-lift have been published. This report aims to present the results of correction for postrhytidoplasty stigmas using follicular transplantation. Patient assessment is discussed, and relevant technical aspects are detailed and illustrated.
Methods: A prospective study at the Ivo Pitanguy Clinic investigated patients who underwent hair transplantation to correct unaesthetic signs secondary to rhytidoplasty from January 2001 to December 2004. The aesthetic results and complications were evaluated, as well as the patients' satisfaction rate. The patients presented in this series either were referred from another service or had their rhytidoplasty originally performed in the authors' service.
Results: A total of 33 female patients were included in this study. Two patients were lost to follow-up evaluation and not included. The complications were minor. In the late follow-up assessment, 24 patients classified the result as excellent, 4 as satisfactory, and 3 as unsatisfactory. Only the patients who classified the results as unsatisfactory requested a second procedure (i.e., another follicular transplantation).
Conclusions: When performed by an experienced surgical team, the follicular unit transplantation technique is a simple, safe, and efficient way to correct stigmas secondary to a rhytidoplasty, such as a visible scar or a displaced hairline, with satisfactory results and a very low complication rate.

Key words: Follicular transplantation—Rhytidoplasty—Postrhytidoplasty stigmas

Correspondence to H. N. Radwanski M.D., Rua Dona Mariana, 143 Suite F 22, Rio de Janeiro, Brazil 22280-020, *email:* dr.henrique@pilos.com.br, www.pilos.com.br

Face-lifting, or rhytidoplasty, is one of the most frequently performed aesthetic surgical procedures. Myriad different approaches have been described that allow for the correction of superficial and deep facial structures, addressing separate regions and the face as a whole [12,13]. Currently, the plastic surgeon must understand that patients are well informed as to the basics of the operation, have a high aesthetic demand, and are thus frequently anxious regarding the final result. It is therefore imperative that visible signs of the operation, such as scars and the alteration of anatomic landmarks, be nonexistent or at least discrete so as to cause no social embarrassment [4,6,7,9].

The superior dislocation of the temporal hairline is one of the most obvious changes after a rhytidoplasty. The increase in the distance between the lateral eyebrow and the sideburn may lead to a displeasing pulled-up aspect, denoted as the "face-lift appearance" (and as "the lizard face" by some) [9]. This stigma is increasingly frequent after a second or even a third facial procedure [13]. Likewise, the traction of the cervical flap may cause dislocation of the hairline, creating a steplike defect over the mastoid that

becomes noticeable if the patient has short hair or prefers to use a bunny tail. Finally, scars, either inside the hairline or along the border of the facial flap, can become visible. Even with the best of efforts, pretrichial (or prepilose) incisions may become hypochromic or widened, and thus may create an abrupt barrier to the hairline [4].

Various procedures have been forwarded for the correction of these stigmas. Local flaps, with or without previous tissue expansion, are the most frequently mentioned [5]. The attempt to reposition the hairline with flaps is useful if local tissues have adequate elasticity. However, it is inherent to flap advancement or rotation that a marginal scar be placed, which causes visibility of the flap. The follicular density and direction of hair growth of the flap also cause poor simulation, especially in the delicate region of the sideburn [16]. Finally, flaps may suffer from poor vascularity, causing a survival risk for a large number of hair follicles.

Hair grafting, using the follicular unit transplantation technique, is a relatively simple procedure that allows for the camouflaging of incisions and correction of the dislocated hairline, with no additional scars and very low morbidity [2,3,10,11]. A previous publication by the authors covered specifically the correction of the temporal hairline, showing satisfactory final results [15]. It was shown that the direction of hair growth is controlled, and that in experienced hands, a single session may be sufficient for restoration of the affected areas.

This report aims to expand the indications for this procedure, presenting the results for the correction of different stigmas from a rhytidoplasty using follicular transplantation. Patient assessment is discussed, and technical aspects are detailed and illustrated.



Fig. 1. A wide scar developed in the left temporal incision of a 54-year-old female patient after a face-lift. The procedure of choice was a follicular transplantation to restore a satisfactory volume of hair.

Methods

This prospective study investigated patients who underwent follicular transplantation to correct various types of unaesthetic signs secondary to rhytidoplasty in the period January 2001 to December 2004. All the procedures were performed at the Ivo Pitanguy Clinic. The patients were seen at regular intervals (every 3 months) until the completion of the first postoperative year. The aesthetic results and complications were evaluated, as well as the patients' satisfaction rate.

Surgical Technique

The follicular transplantation procedure usually is performed with the patient under local anesthesia associated with endovenous sedation administered by the anesthesiologist. The desired areas to be reconstructed are previously demarcated, and the patient is requested to check the design of the hairline.

The donor area of first choice is the occipital region, where hair density is greatest. After determination of the approximate number of grafts needed, a strip of scalp is demarcated, with the dimensions varying per case. To avert widening of the scar, care should be taken to avoid removing too wide a strip. Length is preferable to width. A local anesthetic (0.25% lidocaine with epinephrine at 1:100,000) is infiltrated at least 15 min before the incision is made. Harvesting is carefully done, with the scalpel parallel to the hairs to avoid sectioning of follicles along the edge of the strip. The depth of strip removal is at the subcutaneous level so as not to cause lesions to the main arteries and sensitive innervation. Undermining usually is not done, and closure is in a single plane using 4–0 mononylon sutures.

The grafts are prepared in follicular units by a specialized team using ×10 microscopic augmentation. The fat excess is trimmed off, and careful dissection leaves one to four follicles per graft (i.e., follicular unit grafts). Prepared grafts are left in iced saline awaiting placement. This method ensures total respect for the anatomy of each follicular unit and maintains viability of the follicles.

The recipient area is infiltrated with the same anesthetic solution, which causes vasoconstriction and also produces a desired tumescence. Orifices for the placement of the grafts are made exclusively with 18-gauge needles (3- and 4-follicle grafts) and 19-gauge needles (1- and 2-follicle grafts). The correct angle and direction of normal hair growth in the

temporal and cervical hairline must be respected to ensure that the transplanted hairs will grow in the same pattern. Graft insertion is done using very fine curved forceps, with the grafts slipped in the bevel of the needle (Fig. 1). Forcing and crushing of the grafts must be avoided. When transplantation is performed over scar tissue, it is useful to make all the orifices before placement of the grafts because this avoids their popping out due to excessive pressure with the needle. Needles are discarded promptly as soon as the surgeon feels that the sharpness has been lost.

Graft distribution is such that the units containing one and two follicles are placed along the most anterior edge of the hairline, with those containing three and four follicles transplanted further inside the demarcation. The density of the transplanted grafts varies in each case. Ideally, 20 to 30 grafts/cm^2 ensures enough final volume in a single session. Over scar tissue, grafts should be more widely spaced to allow for adequate perfusion.

No occlusive dressing is necessary. The patient is discharged on the same day. The head is washed on postoperative day 1 by a member of the team, and the patient subsequently washes her head daily from day 2 on. Sutures are removed after 10 days. Hair growth is noted to begin about the third postoperative month. Follow-up revisions are performed periodically to ensure that the patient is kept under the surgeon's supervision. Final results, with complete growth of the transplanted follicles, are expected 1 year after transplantation.

Results

In the 4-year study period, 33 consecutive female patients were submitted to follicular transplantation to camouflage unsightly scars or to correct hairline dislocations after a face-lift. The temporal hairline (i.e., the sideburn) was transplanted for 29 patients, and 12 patients underwent grafting to the cervical hairline step deformity simultaneously. In two cases, the frontal hairline was transplanted to correct a pretrichial incision (i.e., a coronal lift was performed through a prepilose approach), and two patients underwent this procedure to correct widened scars inside the temporal hairline. Two patients were lost to follow-up evaluation and not included in the study.

The mean age of the patients was 44.9 years (range, 39–72 years). The mean number of transplanted grafts on each side was 223 (range, 178–357). The success rate in terms of follicle survival and hair growth was empirically estimated to be about 90%.

The complications were minor. Three patients presented with scar widening at the donor site, and eight patients reported temporary hair loss (i.e., telogen effluvium). In the late follow-up assessment (i.e., after 9 months or more), all the patients described a significant improvement in the density of hair over the grafted area. The aesthetic outcome was evaluated by the patients themselves, with 24 patients classifying the result as excellent, 4 as satisfactory, and 3 as unsatisfactory.



Fig. 2. A total of 220 follicular unit grafts were placed in this area, for an approximate density of 20 follicle units/cm^2.

In most cases, a second session to increase the hair density was routinely offered. Only the patients who classified the results as poor requested a second procedure, and this was done no less than 1 year after the first session. At a late follow-up assessment, these patients classified the result as satisfactory (Figs. 2 to 14).

Discussion

A satisfactory result from an aesthetic facial procedure is obtained when the signs of surgery are undetectable. The "round-lifting" rhytidoplasty, as described originally by Pitanguy [12], is the principal technique used in our service because it maintains anatomic landmarks without distortion. A precise vector connecting the tragus to Darwin's tubercle of the ear ensures that the facial flap is well-positioned. The cervical (or posterior) flap is likewise positioned so as not to interrupt the hairline over the mastoid.

Nevertheless, it is inherent to any and all rhytidoplasty techniques that flaps are undermined, then subsequently pulled and positioned [7]. Depending on the direction of traction, and on the density and design of the patient's sideburn, even a precise repositioning of the facial flap may cause elevation of the temporal hairline [4]. Likewise, in the cervical region, traction of the flap may cause a step-off and an interruption of the hairline, with an apparent scar. To avoid these dislocations, the surgeon may prefer to



Figs. 3 and 4. This 56-year-old woman presented with a large intrapilose scar with partial interruption of the temporal hairline after a rhytidoplasty. She requested restoration of a natural hairline, and a follicular transplantation was planned.



Fig. 5. The same patient 10 days after the hair transplantation showing the design of the hairline with a total of 450 grafts.



Fig. 6. The patient 8 months after the follicular unit transplantation showing a satisfactory volume of hair.

place pretrichial incisions. This approach currently is very common along the temporal hairline [4,6,13].

A visible scar and a displaced hairline are among the most telling signs of a rhytidoplasty, and are more frequent after repeated face-lift surgeries [9]. Likewise, although quite uncommon, widened scars inside the hairline from excessive tension on closure may become evident, causing social embarrassment to the patient. In these cases, a reconstructive procedure is indicated, and should be performed so as to create a natural hairline without adding new scars. It is the opinion of the authors that follicular transplantation is the technique that alone meets these criteria.

We briefly mention alternative procedures. The use of local flaps, either by simple advancement or following tissue expansion, has proved to be invaluable in reconstruction of the scalp. For restoration of the sideburn, Rodriguez-Camps [16] has described a triangular transposition flap from the superior retroauricular area. However, the direction of the hairs is different, the density is considerably greater, and a marginal scar is necessary to accommodate the flap.



Fig. 7. Preoperative appearance of a 63-year-old patient with very low density of the temporal hairline.



Fig. 9. The cervical region of the same patient showing dislocation of the hairline with a visible scar.



Fig. 8. Result 1 year after a single session involving approximately 210 follicular grafts.



Fig. 10. Result 1 year after a single session involving approximately 188 follicular units.

Furthermore, flap rotation or advancement, and certainly tissue expansion, are not without risks.

Finally, the attempt to correct a widened intrapilose scar with simple resection usually results in an equally widened incision attributable to the stretch-back phenomenon, and causes great frustration to both the patient and the surgeon. These are drawbacks that limit the indication of these alternative procedures for the reconstruction of the hairline and unsightly scars.

A significant development in hair restoration surgery has been follicular unit transplantation. Since the initial publication by Headington [8], it has been known that hairs grow in units, and that these should be respected when grafts are prepared. The use of magnification, with microscopes or even loupes, allows the team of trained technicians to perform dissection of each follicular unit, thus preserving the viability of each follicle. This method has greatly enhanced the final result for the correction of male



Fig. 11. This 66-year-old patient presented with dislocation of the sideburn subsequent to a rhytidoplasty.



Fig. 13. The cervical region of the same patient with a visible scar.



Fig. 12. Satisfactory density 1 year after a single session involving approximately 190 grafts.



Fig. 14. Result 1 year after a single session of follicular unit transplantation.

pattern baldness with regard to the quality of the transplanted hair as well as volume. Furthermore, this is an outpatient procedure with minimal morbidity [1,3].

Surgeons experienced in hair transplantation favor follicular unit transplantation over other techniques for restoration of the displaced hairline. Among others, Barrera [2] and Nordström et al. [11] report highly satisfactory results with a single session. A previous paper presented the experience of the current authors in reconstructing defects caused by a face-lift, but was limited to the temporal hairline [15]. In this report, we have expanded the possibilities of this technique in different situations, which may be summarized as stigmas from a rhytidoplasty.

This collective experience has proved that hair grafts ''take'' even in unsuitable recipient sites, such as scar tissue. It is interesting to mention that follicular

grafts have even been transplanted over full-thickness skin grafts, with excellent final hair growth [14].

To achieve the most natural result, correct angulation and direction of the orifices in which the grafts are placed are essential. At the temporal and retroauricular hairline, this should be at approximately a 30° angle and directed downward and slightly backward. This ensures that transplanted hair will grow exactly in the same angle and direction as natural hair does in these regions [2,11,15].

Finally, although it is not necessary to create a very dense hairline, it is important to try placing at least 20 to 30 follicular units/cm^2, which will give sufficient volume of hair growth to permit completion of the reconstruction in a single session. Nevertheless, a second transplantation should not be ruled out if the patient requests greater density. There usually is sufficient donor area for a second session.

Conclusions

The follicular unit transplantation technique is a simple, safe, and efficient way to correct stigmas secondary to a rhytidoplasty, such as a visible prepilose scar or a displaced hairline, with satisfactory results and a very low complication rate.

The authors state that no financial support was given in the preparation of this article. They also state that there are no commercial associations that might create a conflict of interest with any information presented in this article. All the authors are in agreement with the final version of the article.

References

1. Barrera A: Hair transplantation: The art of micrografting and minigrafting. *Quality Medical Publishing,* St. Louis, 2002
2. Barrera A: The use of micrografts and minigrafts for the correction of the postrhytidectomy loss of sideburn. *Plast Reconstr Surg* **102:**2237–2240, 1998
3. Bernstein RM, Rassman WR: Follicular unit transplantation. In: Haber RS, Stough DB (eds) Hair transplantation. Elsevier, Philadelphia, U.S.A. pp. 91–98, 2006
4. de Castro CC: Preauricular, sideburn operating procedures for a natural look in face-lifts. *Aesth Plast Surg* **15:**149–153, 1991
5. Giraldo F, Gonzalez C, Garnica I, Ferron M, Rus JA: Sideburn reconstruction with an expanded supraauricular trapezoidal flap. *Plast Reconstr Surg* **100:**257–259, 1997
6. Guyuron B, Watkins F, Totonchi A: Modified temporal incision for facial rhytidectomy: An 18-year experience. *Plast Reconstr Surg* **115:**609, 2005
7. Hamra ST: Prevention and correction of the "face-lift" appearance. *Facial Plast Surg* **16:**215–229, 2000
8. Headington JT: Transverse microscopic anatomy of the human scalp. *Arch Dermatol* **120:**449–451, 1984
9. Matarasso A, Elkwood A, Rankin M, Elkowitz M: National plastic surgery survey: Face-lift techniques and complications. *Plast Reconstr Surg* **106:**1185–1195, 2000
10. Nordström REA: Sideburn reconstruction. *Plast Reconstr Surg* **88:**1107–1111, 1991
11. Nordström REA, Greco M, Vitagliano T: Correction of sideburn defects after face-lift operations. *Aesth Plast Surg* **24:**429–439, 2000
12. Pitanguy I: Facial cosmetic surgery: A 30-year perspective. *Plast Reconstr Surg* **105:**1517–1526, 2000
13. Pitanguy I, Brentano JMS, Salgado F, Radwanski HN, Carpeggiani R: Incisions in primary and secondary rhytidoplasties. *Rev Bras Cir* **85:**165–176, 1995
14. Radwanski HN, Jaimovich CA: Case report: Reconstruction of the temporal hairline following tumor removal. *Rev Soc Bras Cir Plast* **18:**9–16, 2003
15. Radwanski HN, Pitanguy I, Nunes D, Nazima F: Transplante capilar como alternativa para a correção da elevação da linha de implantação pilosa temporal após ritidoplastias (Hair transplantation as an alternative for the correction of sideburn defects after rhytidoplasty). *Rev Soc Bras Cir Plast* **20:**167–172, 2005
16. Rodriguez-Camps S: Reconstruction of sideburn and temporal area after a face-lift. *Aesth Plast Surg* **26:**181–183, 2002



The Hair Transplant Surgeon's Defense in Compensation Lawsuits Filed by his Patients



Gustavo Graça Mercadante
Lawyer (OAB/MG 38.255) since 1984, specialized in the Defense of Health Professionals, working in Judicial Litigation, Arbitration and Private Mediation – Lawyer at ABCRC since 2019.

The Superior Court of Justice has a consolidated position regarding the understanding that plastic surgery that is "not restorative or merely aesthetic" attracts an obligation of result.

Thus, it is of fundamental importance to debate, in the compensation process, regarding the nature of the plastic surgery under discussion in the litigation.

If the evidence presented in the case concludes that the surgery is "merely aesthetic" (sic), we will be faced with an obligation of result; if, on the contrary, it is proven that the surgery in question is restorative, the case will be judged taking into account the obligation of means.

The definition, as to the application to the case, of the obligation of means or of result, is of utmost importance for the parties, because: if the obligation is of means - it will be up to the author to prove that there was medical fault (imprudence, incompetence or negligence), whereas, if it is considered as an obligation of result - it will be up to the medical professional to demonstrate that there was fault on the author's part, that there was no medical fault , but rather a fortuitous event (unfavorable evolution due to factors not controllable by the surgeon who acted within the medical technique).

Regarding Hair Transplant, national doctrine and jurisprudence are scarce and imprecise, and there are no significant cases for careful analysis.

It is evident that hair transplant should be classified as a reparative surgical procedure. This is because the primary objective of the procedure is to enable patients to resume their normal social lives. Hair loss can result from various etiologies, including pathology, trauma, or genetics. The surgical intervention aims to rectify the effects of hair loss caused by these underlying factors.

Thus, for hair transplant surgeons to have effective chances in a dispute in a compensation process brought by their patient, we strongly recommend that:

1. Have an impeccable medical record that clearly states that it is restorative surgery to repair hair loss resulting from: pathology, accident, genetic factor, traction, etc.;

2. Submit an Informed Consent Form containing extensive information to the patient about the risks and the unforgivable risks of the contracted medical procedure;

3. Present good photographic records - before, during and after;

4. Be assisted by a lawyer specializing in medical law who can conduct the case well.

With these considerations and precautions, we understand that the surgeon, who works in Hair Transplant, will be well documented to conduct, with good chances of success, any compensation discussions brought by his patients to the Judiciary.

These are the considerations that occur to us on the subject.

If you need any further information, please don't hesitate to contact me via my e-mail (gustavo@mercadante.adv.br)or my Instagram (@gustavogracamercadante).

Therapeutic approach to Frontal Fibrosing Alopecia (FFA)



Dr. Marcela de Lima Vidal
Dermatologist
CRM-PB 9593 | RQE 4489

Since its description in 1994 by Kossard[1], the treatment of frontal fibrosing alopecia has been challenging. Although there are already well-defined diagnostic criteria[2], the etiopathogenesis of the disease is still unclear, involving genetic factors3 and environmental triggers such as probable exposure to skin irritants (cosmetics and fragrances). However, this association is still a matter of debate in the scientific environment.[4]

Clinical treatment is based on anti-inflammatory and anti-androgen medications with varying results in literature. The expected outcome is to slow the progression and relief of symptoms, but so far there is no standard treatment due to the scarcity of randomized studies. Topical therapeutic options are corticosteroids and calcineurin inhibitors used for symptomatic relief, but their role in inhibiting progression is not agreed and, therefore, they should not be used alone. Intralesional corticosteroids are recommended in some cases, but they should be used with caution and in low concentrations (triamcinolone acetonide 2.5mg/ml) due to the risk of worsening the skin atrophy already characteristic of the disease.[5]

According to the literature, antiandrogens (finasteride and dutasteride, the most used) appear



to be effective in inhibiting the progression of FFA.[6] Hormonal changes may be involved in the pathogenesis of inflammation, although this is a mechanism that has not yet been fully elucidated.[4]

Treatments that aim to reduce the lymphocytic infiltrate that affects the follicle are hydroxychloroquine, whose efficacy is supported in the literature[7], doxycycline[8] and methotrexate9 - the latter with more variable results in the scientific community.

Although it has been reported that oral isotretinoin can reduce the progression of the disease[10], this effect has not been observed by other authors. It is successfully used in low doses for facial papules.[11]

Topical and oral minoxidil can be used effectively and safely to offer cosmetic improvements to patients, increasing hair thickness and volume, especially in postmenopausal women, who experience a shortening of the anagen phase, resulting in thinning and loss of volume.[12]



There is evidence that favors the use of diode laser (LED) as an adjuvant treatment for FFA, reducing symptoms and improving the thickness and number of terminal follicles.[13]

More recently, oral and topical JAK inhibitors (tofacitinib, baricitinib, ruxolitinib) are being used to treat refractory patients with success in reducing symptoms. More studies with a larger number of patients and follow-up time are needed to assess the real impact of these drugs on disease progression.[14]

Hair transplant may be an alternative for patients dissatisfied with hair coverage; ideally, it should be performed after stabilization of the progression for 1-2 years. Although graft survival decreases significantly after 5 years, patient satisfaction is often high.[15]

The monitoring and assessment of the intensity of the inflammation are also complex. Clinical findings such as desquamation and perifollicular erythema may not correlate with the intensity of the inflammatory infiltrate on histopathology[16], and the presence of these clinical findings may also not correlate with progression.[17] To assess inflammation, the presence of dystrophic hair ("pilli torti") and a positive pull test for an anagen follicle should be evaluated more. Standardized photographic recording is essential to assess progress and make therapeutic decisions.

References

1. Kossard, S. Postmenopausal frontal fibrosing alopecia. Scarring alopecia in a pattern distribution. Arch Dermatol. 1994; 130(6):770-4.

2. Vañó-Galván S, et al. Updated diagnostic criteria for frontal fibrosing alopecia. JAAD, 2018; 78 (1):21-22.

3. Saceda-Corralo D, et al. Genotyping of the rs1800440 Polymorphism in CYP1B1 Gene and the rs9258883 Polymorphism in HLA-B Gene in a Spanish Cohort of 223 Patients with Frontal Fibrosing Alopecia. Acta Dermato-Venereologica, 2023; 103: adv9604.

4. Miao Y-J. et al. Frontal fibrosing alopecia: A review of disease pathogenesis. Front. Med, 2022; 9: 911944.

5. Iorizzo M, Tosti A. Frontal Fibrosing Alopecia: An Update on Pathogenesis, Diagnosis, and Treatment. Am J Clin Dermatol. 2019;20:379-90.

6. Ho A, Shapiro J. Medical therapy for frontal fibrosing alopecia: A review and clinical approach. J Am Acad Dermatol. 2019;81:568-80.

7. Chiang C, Sah D, Cho BK, Ochoa BE, Price VH. Hydroxychloroquine and lichen planopilaris: efficacy and introduction of Lichen Planopilaris Activity Index scoring system. J Am Acad Dermatol. 2010;62:387-92.

8. Samrao A, Chew AL, Price V. Frontal fibrosing alopecia: a clinical review of 36 patients. Br J Dermatol. 2010;163:1296-300

9. Morandi Stumpf, M.A.; do Rocio Valenga Baroni, E.; Schafranski, M.D. Frontal fibrosing alopecia: Successfully treated with methotrexate or just the natural disease progression? Acta Dermatovenerol. Croat. 2020, 28, 202-203.

10. Rakowska A, Gradzińska A, Olszewska M, Rudnicka L. Efficacy of isotretinoin and acitretin in treatment of frontal fibrosing alopecia: Retrospective analysis of 54 cases. J Drugs Dermatology. 2017;16:988-92.

11. Pirmez R, Duque-Estrada B, Barreto T, Quintella DC, Cuzzi T. Successful Treatment of Facial Papules in Frontal Fibrosing Alopecia with Oral Isotretinoin. Ski Appendage Disord. 2017;3:111-3.

12. Ly N, McClure EM, Hordinsky MK, et al. Safety and efficacy of minoxidil treatment in scarring alopecia: a scoping review. J Drugs Dermatol. 2024;23:146-51.

13. Gerkowicz A, Bartosińska J, Wolska-Gawron K, Michalska-Jakubus M, Kwaśny M, Krasowska D. Application of superluminescent diodes (sLED) in the treatment of scarring alopecia-a pilot study. Photodiagnosis Photodyn Ther. 2019;28:195-200.

14. Dunn C, et al. Janus kinase inhibition for the treatment of refractory frontal fibrosing alopecia: A case series and review of the literature. JAAD 2023; 40: 47-52.

15. Vañó-Galván S, et al. Hair transplant in frontal fibrosing alopecia: A multicenter review of 51 patients. J Am Acad Dermatol. 2019;81:865-6.

16. Fechine C. Líquen plano pilar e alopecia frontal fibrosante: correlação dos achados clínicos e dermatoscópicos com o grau de inflamação do exame histopatológico. Biblioteca Digitais de Teses e Dissertações da USP, 2022. [CHECKTAGS] Biblioteca Digitais de Teses e Dissertações da USP, 2022.

17. Saceda-Corralo D, et al. Association of Inflammation With Progression of Hair Loss in Women With Frontal Fibrosing Alopecia. JAMA Dermatol. 2020;156:700-2.

Complications of Using Oral Minoxidil: Use of oral minoxidil in the treatment of baldness: evolution, evidence, and safety considerations



With an introduction by Dr. Solon Eduardo G. Souza
CRM 126.779
RQE 39.560



Dr. Leila David Bloch
CRM-SP 108.287
RQE 27.362

The first reports about the use of oral minoxidil for therapeutic purposes in hair disorders date back approximately a decade. In 2015, Yang and Thai [1] described the first published case of chemotherapy-induced alopecia treated with oral minoxidil at a dose of 1 mg/day, with a satisfactory clinical response. The following year, Sinclair[2] reported the successful treatment of a patient with moniletrix, using low doses of oral minoxidil ranging from 0.25 mg to 0.5 mg/day.

Since then, interest in the use of oral minoxidil has grown significantly. This popularization can be attributed to the greater therapeutic adherence observed with the oral formulation, when compared to the topical form, in addition to its consistent clinical efficacy in several alopecia.

In recent years, there has been increasing scientific production on the subject. In the last year alone, 43 publications indexed in PubMed were identified addressing the use of oral minoxidil in different clinical settings. Among these publications, the following stand out: an international consensus[3], a meta-analysis[4], a multicenter study[5] and even authors beginning to suggest the use of high doses (>5 mg/day) in the treatment of androgenetic alopecia, especially in refractory cases[6].

Despite the advances and the growing body of favorable evidence, doubts, and concerns regarding the cardiovascular safety of oral minoxidil persist, both on the part of doctors and patients.

In this issue, Dr. Leila Bloch carries out a comprehensive review of the adverse effects associated with oral minoxidil, discussing their frequency, the mechanisms involved and strategies for clinical management. It is essential for professionals who prescribe this medication in daily dermatological practice.

Enjoy your reading,

Dr. Solon Eduardo G. Souza



References

1. Yang X, Thai K-E. Treatment of permanent chemotherapy-induced alopecia with low dose oral minoxidil. Australasian J Dermatol. 2015;57(4):e130–e132. doi:10.1111/ajd.12,350

2. Sinclair R. Treatment of monilethrix with oral minoxidil. JAAD Case Rep. 2016;2(3):212–215. doi:10.1016/j.jdcr.2016.02.011

3. Akiska YM, Mirmirani P, Roseborough I, et al. Low-Dose Oral Minoxidil Initiation for Patients With Hair Loss: An International Modified Delphi Consensus Statement. JAMA Dermatol. 2025;161(1):87–95. doi:10.1001/jamadermatol.2024.4593

4. Chen M, Weichert M, Guo W, Ruzic R, Briley J. Low-dose oral minoxidil does not significantly affect blood pressure: A systematic review and meta-analysis. J Am Acad Dermatol. 2025;92(3):554-555. doi:10.1016/j.jaad.2024.10.057

5. Jimenez-Cauhe J, González-Ramos M, et al. Safety and tolerability of low-dose oral minoxidil in patients aged 65 or older: A multicenter study of 321 patients. J Am Acad Dermatol. 2025. doi:10.1016/j.jaad.2025.05.1363

6. Moreno-Arrones OM, Hermosa-Gelbard A, et al. High-dose oral minoxidil for the treatment of androgenetic alopecia. Actas Dermosifiliogr. 2025. doi:10.1016/j.ad.2025.05.018

Complications of Using Oral Minoxidil

The oral administration of low dose minoxidil has emerged as a promising therapeutic alternative in dermatology, particularly in the management of androgenetic alopecia (AGA) and chronic telogen effluvium, especially in cases where patients exhibit an unsatisfactory response to topical treatments.

Higher adherence, convenient dosage, and sustained efficacy have driven its popularization. However, the expansion of this practice necessitates a more profound comprehension of the potential risks involved, particularly the complications, which are frequently underestimated or misinterpreted as benign and reversible adverse effects.

Distinguishing between predictable adverse effects and serious clinical complications is essential for ensuring the safe prescription of medication, adequate monitoring, and patient protection.

Minoxidil requires hepatic metabolization to form its active compound, and its primary mechanism of action is the relaxation of vascular smooth muscle through the activation of ATP-dependent potassium channels, resulting in arteriolar vasodilation. This effect, desired in severe refractory hypertension, when explored in hair restoration, requires dose control to avoid significant cardiovascular repercussions.

The doses used in trichology range from 0.25 milligrams to 5 milligrams per day (in contrast to ≥10 milligrams in hypertension), and systemic effects persist, particularly in patients with genetic predisposition, hidden comorbidities, or concomitant use of other vasoactive drugs.

The most common adverse effects are benign, reversible, and related to the dose or individual susceptibility. They are:

- **Hypertrichosis:** the most common, especially in women, affecting the face, trunk, and limbs;
- **Mild peripheral edema:** often in the periorbital region, due to sodium and water retention;
- **Reflex tachycardia:** mild and usually asymptomatic;
- **Headache and dizziness:** in the preliminary stages of use;
- **Mild postural hypotension:** rare at doses <2.5 mg.

These effects, although uncomfortable, do not constitute complications, as they are predictable, self-limiting, and manageable with dosage adjustment.

Complications are defined as events characterized by their severity and unanticipation, which may necessitate medical



Systemic lupus erythematosus

intervention and potentially compromise patient survival. Although rare, these occurrences have been documented both at therapeutic doses and in patients with no apparent comorbidities. They are:

- Pericardial and Pleural Effusion: historically, associated with the use of minoxidil in full doses (>10 mg/day) but have already been described in lower doses. These are potentially serious complications that may develop into cardiac tamponade if not recognized. Reports of pericardial effusion in young women using 2.5 to 5 mg/day have been documented, especially in patients with a history of systemic lupus erythematosus or mild renal dysfunction. In general, they are reversible with drug discontinuation and clinical support.

CASE 1
SINCLAIR ET AL., 2022

A 35-year-old woman with a history of systemic lupus erythematosus (SLE) in remission. Oral minoxidil 2.5 mg/day was started for androgenetic alopecia. After 21 days, he developed progressive dyspnea and pleuritic chest pain. An echocardiogram revealed moderate pericardial effusion with incipient signs of tamponade. Minoxidil was discontinued and corticosteroid therapy was intensified. It evolved with complete resolution in 7 days.

CASE 2
FDA PHARMACOVIGILANCE REPORT, 2021

A 58-year-old man with stage 3 chronic kidney disease started oral minoxidil 5 mg/day for alopecia. After 4 weeks, he developed dyspnea and pleural effusion on the right. He required therapeutic thoracentesis.

- Pulmonary Edema and Anasarca: water retention exacerbated by minoxidil may exceed the limits of mild peripheral edema, progressing to symptoms of anasarca or acute pulmonary edema, especially in patients with compensated heart failure or borderline renal function. Symptoms include dyspnea, orthopnea, abrupt weight gain, and gasping. To reverse the condition, immediate discontinuation of the medication, hospitalization and the use of diuretics are necessary.

CASE 1
VAÑÓ-GALVÁN ET AL., 2020

A healthy 46-year-old man started on 5 mg/day for refractory AGA. After 3 weeks, she developed orthopnoea and gaspings. Chest X-ray: vascular congestion and perihilar infiltrate. BNP slightly elevated. No previous history of heart disease. The condition reversed after discontinuation of the medication and the use of diuretics.

- Severe Arrhythmias and Sudden Death: although rare, the occurrence of lethal ventricular arrhythmias and sudden death has been described in predisposed individuals, even at doses of 1.25 mg/day. Minoxidil is believed to prolong the QT interval in susceptible individuals and the simultaneous use of medications with a QT-prolonging effect may increase the risk. Thus, previous ECG and family history of sudden death could aid in risk assessment prior to prescription.

CASE 1
CASTELLS ET AL., 2022

A 27-year-old man with no apparent comorbidities. He used to use minoxidil 1.25 mg/day for 2 months. He was found unconscious at night. Previous ECG normal. Autopsy showed no structural abnormalities. Post-mortem genetic study: mutation in the KCNH2 gene (Long QT Syndrome type 2).

- Silent Myocardial Ischemia and Cardiac Decompensation: Intense arteriolar vasodilation may reduce coronary perfusion pressure in individuals with occult coronary artery disease, precipitating silent ischemia or arrhythmia.

These data underscore the imperative for cardiovascular screening prior to initiating Minoxidil, particularly among high-risk patients (elderly patients [>60 years of age] with subclinical cardiovascular disease; patients with autoimmune comorbidities; mild to moderate chronic kidney disease; grade II or III obesity; use of medications that affect blood pressure; and patients with a family history of sudden death or hereditary arrhythmias).

Therefore, before prescribing, evaluate the complete medical history focusing on heart, autoimmune, and kidney diseases; basal blood pressure, ECG, and renal function (urea, creatinine, electrolytes). Additionally, it would be beneficial to obtain written informed consent explaining the rare risks.

Initiating treatment with low doses (0.25 to 1 mg/day), performing monthly clinical follow-up for the first three months, and repeated ECG in symptomatic patients or with a relevant family history helped to control risks.

While effective and widely tolerated, the use of oral minoxidil is not risk-free. The distinction between adverse effects and clinical complications is essential for an ethical, safe, and evidence-based prescription. Cases of pericardial effusion, pulmonary edema, and sudden death, although rare, reinforce the need for adequate screening and strict monitoring.

References

1. Castells L, et al. QT prolongation and proarrhythmic potential of oral minoxidil: genetic considerations. Eur Heart J Case Rep. 2022.

2. FDA. Minoxidil (Loniten®) Prescribing Information. Revised 2021.

3. Jimenez-Cauhe J, et al. Cardiovascular safety of oral minoxidil in dermatology: a critical analysis. J Eur Acad Dermatol Venereol. 2023.

4. Ramot Y, et al. Low-dose oral minoxidil for hair loss: a comprehensive review. Int J Dermatol. 2022;61(10):e398–e406.

5. Sinclair R, et al. Systemic effects, and safety of low-dose oral minoxidil in dermatologic use. J Am Acad Dermatol. 2022;87(1):74-84.

6. Vañó-Galván S, et al. Low-dose oral minoxidil for androgenetic alopecia: a multicenter study. J Am Acad Dermat

FAKOM

(11) 93298-3195 capilar@fakom.com.br fkmmedical.com fmedicalbr

Exclusiva em atender a sua necessidade

A **Fakom** é uma empresa nacional, fabricante de instrumentos cirúrgicos com uma vasta experiência construída em seus 22 anos de existência, trazendo sempre qualidade, inovação e tecnologia de ponta para criar uma linha exclusiva, nas áreas de **oftalmologia**, **dermatologia**, **estética odontológica e no transplante capilar**.

Nossa expertise em **micro instrumentos** nos leva a entregar aos nossos parceiros e clientes uma linha exclusiva e confiável para atender a necessidade médica dos maiores cirurgiões do Brasil e outras nações.

O mundo Fakom oferece uma linha com experiência percebida atendendo às mais rigorosas exigências e normas técnicas garantindo bom desempenho de uma cirurgia.





Sala Ricardo Lemos begins new phase in 2025 with change to Fórum Ricardo Lemos



Dr. Solon Eduardo G. Souza
CRM 126.779
RQE 39.560

On May 20, 2025, the first edition of Sala Ricardo Lemos of the year took place, an already established bimonthly meeting of ABCRC, which promotes virtual debates among its members on the most current topics in hair transplant. The May edition featured renowned Brazilian experts who stood out as speakers at the World FUE Institute (WFI) congress, held in April in São Paulo.

The guest speakers, Dr. Marta Zollinger, Pablo Cirino and Rodrigo Pirmez addressed topics of great relevance to the daily lives of hair surgeons. Dr. Marta discussed the Long Hair Afro FUE technique, while Dr. Pablo presented his experience with regenerative techniques such as MMP. Dr. Rodrigo shared the current guidelines for the use of dutasteride in the treatment of androgenetic alopecia.

The meeting was coordinated by Dr. Solon Eduardo and Rubem Miranda, who will lead the organization of future editions, always with the objective of promoting the exchange of knowledge and the continuous development of the profession.

Starting with the next edition, scheduled for July 22, 2025, the event will be renamed Ricardo Lemos Forum. The name change, conceived by Dr. Henrique Radwanski, approved by the board of directors of the ABCRC, aims to reflect more adequately the open and interactive nature of the meeting, since the word “forum” refers to the idea of “open space or public place”, in line with the proposal to promote scientific discussions and updates among professionals in the field. Of course, the eponym refers to the dear colleague who left us early: Ricardo Lemos was one of the great pioneers of the follicular unit technique, internationally recognized for his long hair approach, spreading this genuinely Brazilian technique.

The ABCRC reinforces its invitation to all members to take part in this space for learning and exchange, which is already an important meeting point for the hair transplant community in Brazil.

Hair transplant and frontoplasty in a woman suffering from fibrosing alopecia



Rafael Reinert, dermatologist, Blumenau - SC; Marcos Felippe Takano de Saidneuy, Murilo Beduschi and André Felipe Kroenke, from the Regional University of Blumenau - FURB, Blumenau - SC; and Emanoelle Machado, from the University Center of Brusque - UNIFEBE, Brusque - SC.

INTRODUCTION

Frontoplasty and hair transplant techniques emerged in the 90s.[1-2] Both procedures aim to improve quality of life through the treatment of dermatological and morphological conditions (cases of facial feminization) and the restoration of self-esteem.[3]

One of the classic conditions that is within the group of scarring alopecia and demands extreme care from the professional is called frontal fibrosing alopecia, which, at the same time, requires long-term drug treatment, as the condition of the disease itself reconfigures the skin to a scar plane and which, invariably, does not have the viability for the development of attachments in the area.[1-3] The disease also requires, secondarily, an invasive approach, which is often necessary to re-establish full hair and hair growth.[1-3]

OBJECTIVE

Demonstrate the feasibility of performing frontoplasty and hair transplant with FUE technique at the same surgical time.

METHODOLOGY

This is an observational/descriptive case report study addressing fibrosing frontal alopecia.

CASE REPORT

A 47-year-old female patient with no comorbidities presented with fibrosing frontal alopecia eight years ago, with a diagnosis confirmed by detailed dermoscopy. She began treatment with hydroxychloroquine sulfate 400 mg/day and clobetasol in shampoo, applied twice a week for two years, resulting in remission of the disease. For therapeutic continuity and aesthetic approach, hair transplantation was chosen using the FUE technique, associated with frontoplasty to lower the hair implant line. The latter allowed the removal of fibrous tissue in the frontal region, which could compromise the results of the transplant if follicular units were implanted directly over that area.

The surgical procedure lasted eight hours and was carried out



Pre-surgical marking



Incisions in subdermal aponeurosis



Immediate frontoplasty result



Lowering of the hairline with hair transplant, FUE technique and frontoplasty

by a multidisciplinary team. The dermatologist responsible for the hair transplant also assisted the plastic surgeon in performing the frontoplasty. 2,188 follicular units were extracted from the occipital region using a 0.8 mm punch (Trivellini device), with a coefficient of 1.8 hairs per follicular unit. A skin segment was excised in the frontal region measuring 4 cm wide and 20 cm long, followed by simple continuous suturing.

Pre-incisions for follicular implantation were made with 1.0 mm blades, and subsequent implantation was carried out using Smart implanters. The patient underwent light sedation, in addition to infiltration anesthesia at the incision sites.

DISCUSSION

Performing frontoplasty and hair transplant at the same time provides greater convenience for patients who will not have to undergo two different surgical procedures and a faster result. Whereas the combination of two qualified professionals and carrying out surgical planning together can combine their techniques to ensure a more aesthetic result with a higher success rate.[3]

In the present case, in which the patient has fibrosing frontal alopecia, the combination of frontoplasty with hair transplant has a major impact on the final quality of the procedure. At first, frontoplasty will lower the hair line with the removal of a skin fragment in the front of the skull (the same area where scar alopecia affects significantly) and, in the second moment, hair

transplant will implant the follicles in a healthy recipient area with a better completion of the procedure.[4-5]

There is no specific measurement for the ideal forehead height. A detailed analysis of the drawing is recommended, outlining a line suitable for the hair root and discussing with the patient. It is important to remember that, in general, the forehead has a measurement that varies between 6 and 7 centimeters, occupying approximately one third of the vertical length of the face.[4-5]

Furthermore, the study becomes important to encourage other studies that discuss the combination of the two procedures in the same act, as there is a shortage of scientific works in the area.[5]

CONCLUSION

Invasive procedures, such as frontoplasty and hair transplant, can come in handy in cases where drug treatment has had no effect or the benefits have been limited.

When it is necessary to lower the patient's hairline, the combined technique between frontoplasty and hair transplant can be used for a more aesthetic result and with a higher final success rate. For the patient, the benefits go beyond a good result, since they will not need to interrupt their daily routine at two different times for the procedures.

The risks of having multiple incisions on the edge of a flap are necrosis, hematomas and even an increased chance of infection. Therefore, the incisions must follow the skin's force lines and be deeper, ensuring the capture of these follicular units. I advise pre-incisions and implantation using implanters to avoid as minor damage as possible.

References:

1. GRAÇA NETO, Lincoln; ARAUJO, Luiz Roberto Reis; GRAÇA, Ana Clara Minguetti. Frontoplastia endoscópica subperiostal com fixação temporal por fios de sutura. Revista Brasileira de Cirurgia Plástica, v. 37, p. 3-8, 2022.

2. CINTRA, G. S.; CRISTOVÃO, A. X.; SILVA, M. V. de A.; CORAZZA, A. V. Técnicas de Transplante Capilar e suas Principais Complicações: uma Revisão Integrativa. ARCHIVES OF HEALTH INVESTIGATION, [S. l.], v. 11, n. 5, p. 827–831, 2022. DOI: 10.21270/archi.v11i5.6017.

3. Schmidt M, Ramelli E, Atlan M, Cristofari S. Étude anatomique scanographique du sinus frontal des patients transgenres en vue d'une chirurgie de frontoorbitoplastie de féminisation [Frontal sinus anatomical scanographic study of transgender patients for feminization frontoorbitoplasty surgery]. Ann Chir Plast Esthet. 2023;68(2):93-98. doi:10.1016/j.anplas.2023.01.001

4. Jimenez F, Alam M, Vogel JE, Avram M. Hair transplantation: Basic overview. J Am Acad Dermatol. 2021;85(4):803-814. doi:10.1016/j.jaad.2021.03.124

5. Park JH, You SH, Kim N. Frontal hairline lowering with hair transplantation in Asian women with high foreheads. Int J Dermatol. 2019;58(3):360-364. doi:10.1111/ijd.14,388



ADVERTISING AND PUBLICITY



Dr. Márcio André Volkweis
ABCRC Member - Board of Directors 2025-2026
Dermatologist; degree in Business Administration
CRM/RS 28703
RQE 27261

In the last article we published on marketing, we covered its concepts in medicine, making it possible to understand and clarify that the subject is much broader than simply advertising or publicizing a service or product. Often, even, marketing and advertising are confused as if they were the same thing.

In a logical way, marketing can be divided into four Ps: product (or service), price, square (local and public), and promotion/advertisement. The latter is the topic that we are going to address in this article.

Promotion or advertising is one of the marketing tools that encompasses the activities carried out by the organization to communicate and promote its services to the target audience. Its objective is to provide potential consumers with the correct information in an appropriate manner without exaggeration or deception and in an ethical manner.

Although the concept is simple, it is necessary to skillfully define the target audience and the product or service to be offered in a clear manner that cannot be misunderstood. The service's characteristics must be clearly displayed and perceptible to the public so they can make an informed purchasing decision compared to other providers.

Marketing communication is a composite



Philip Kotler, one of the fathers of marketing, defines that any company must assume the role of communicator and promoter of its products or services. For most companies, the issue is not whether they should communicate, but rather what to say, to whom to say it, and how often to say it.

that consists of at least five diverse ways of communicating. The first of these is advertising, that is, any paid form of presentation or promotion of ideas or services by an identified sponsor. Second, sales promotion: short-term incentives to encourage experimentation or purchase of a product or service. Third, advertising public relations, which are a variety of advertisements prepared to promote or protect the image of a company or individual, and of its services. Fourth, personal selling, face-to-face interaction with one or more potential buyers for the purpose of presenting sales, answering questions, and placing orders. And fifth, direct marketing, the use of mail, telephone, e-mail, digital messages, or other impersonal contact tools to communicate or request direct responses from active and potential consumers.

The first step to effective communication is identifying the target audience. A marketing communicator should begin by researching and identifying the characteristics and interests of their target consumers. The patient's knowledge will impact on the communicator's decisions regarding the timing, location, and method of advertising, as well as who will deliver the message. Furthermore, the content of this message will also be extremely important for success to be achieved.

The target audience must be in tune with the service that will be provided. For example, in hair transplants, we will use different forms of communication with a female audience seeking eyebrow surgery, surgery to treat baldness, or treatment and repair for scarring alopecia. A thorough examination reveals that, despite the three audiences' pursuit of analogous services provided by the same professional in a similar setting, they exhibit distinct characteristics. Each of these perspectives is characterized by its distinct focus, with some emphasizing the aesthetic value of the procedure, particularly in cases of eyebrow enhancement, while others underscore its restorative impact, particularly in addressing areas of hair loss. Notably, the significance of the procedure is further accentuated in contexts involving the treatment of debilitating conditions, such as cicatricial alopecia, where it plays a pivotal role in addressing not only aesthetic concerns but also the psychological well-being of the individual.

In the context of medicine, sales promotion stands as the most salient issue in the realm of product communication and promotion, given its direct confrontation with ethical concerns within the health sector. It occurs because it utilizes tools and mechanisms to expedite the acquisition or selection of a service, circumventing rational decisions that are grounded in concrete and meticulous data. These tools, which are effective for items and products, are often viewed negatively within the healthcare sector because they prioritize speed and price over quality and safety. It is important to acknowledge that sales promotions serve as a means of accentuating product and service offerings with the objective of mobilizing idle resources. Their immediate consequences are ephemeral and lack efficacy in fostering long-term organizational development.

The third point, which pertains to public relations and advertising, involves a deliberate effort to enhance the perceived credibility of the professional or the organization they represent. This is achieved by fostering belief among rel-

evant interested parties of market dominance or a superior reputation in comparison to competitors. In this regard, it is noteworthy to mention the active involvement of medical professionals in various academic pursuits. These include teaching activities, the organization and execution of scientific conferences in the relevant domain, active participation in research initiatives, and the production of informative materials such as books, scientific articles, and television programs focused on health-related topics. These endeavors collectively contribute to the establishment of a reputable image among the public.

The fourth point, personal selling, involves the service provider—in this case, the doctor—or their team of assistants and administrators, engaging directly with consumers, potential clients, and patients. This interaction facilitates personal confrontation, wherein the service provider or their team explains the service's needs and characteristics, thereby assisting the consumer in making an informed decision. At this point, a relationship is forged that can be characterized as both captivating and enduring. This relationship is predicated on trust and the reciprocal exchange of knowledge and information that are indispensable for the treatment and long-term monitoring of the patient. This is the first major objective of the communication process carried out by the institution, to offer its service, having its risks and benefits established so that the decision on the purchasing process can be finalized.

Finally, direct marketing, which exists in various forms. This practice, formerly referred to as direct mail, underwent an evolution into telemarketing. Presently, it is executed through electronic media marketing. It proposes sending information, promotions, reminders, in an attempt to maintain a relationship with the patient, so that the brand continues to be remembered, to try to win back customers who have not yet made the decision to provide the service, or to maintain the bond and relationship with the professional and organization in the long term.

RISKS IN MEDICAL COMMUNICATION

A company's communication can be interpreted as an explicit promise that customers use as the basis for their initial expectations. When it comes to competitive aspects, companies make promises and struggle to create expectations that differentiate them in the market and motivate customers to choose them, and not their competitors. The temptation is to promise too much and to raise expectations, which may reach an unrealistic level. Thus, when promises are taken seriously, the result can dissatisfied customers. Luckily, many times, when the services are already well known to customers, they distrust and shy away from these advertisements.

Customer satisfaction is developed by comparing their expectations with their perceptions of the actual service provision process. In times of increasing competitive pressures, companies may be tempted to overpromise. Making promises that the company cannot fulfill increases customer



expectations and customer satisfaction decreases as promises are not fulfilled. First, the customer is disappointed and there is a significant loss of trust between the company and him. Furthermore, disappointed patients tell others about their experience, which increases the adverse effect. The second problem directly affects the employees of the service company. Working in places that make false promises puts employees in a position of commitment and confrontation. Frontline staff must explain to customers why the company does not keep its promises. Given the link between employee and customer satisfac-



According to Christopher Lovelock, marketing communication tools are especially important in a service environment because they help create powerful images and a sense of credibility, trust, and peace of mind. Marketing communications, in one form or another, are essential to a company's success. Without effective communication, potential customers may not even be aware of a service company's existence, what it has to offer, or how to use its products to their fullest advantage. Customers could be more easily attracted by competitors and competitive offers, and there would be no initiative-taking management or control of the company's identity.

tion, creating expectations that cannot be met has devastating long-term effects.

In the next and final of three articles focused on marketing and advertising, we will address one of the biggest challenges we face in our daily lives: how do we get our messages and our marketing strategies noticed? In such a competitive environment, where small or large companies fight to promote their services in the market, both digitally and conventionally, one of the biggest difficulties we have is: how to make our company stand out from the crowd?

References

1. Marketing para Serviços de Saúde – Elselvier, RJ, 2010 – Roberto Minadeo.

2. Administração de marketing – Atlas, SP, 2019 – Philip Kotler.

3. Princípios de Marketing de Serviços – Cengage Learning, SP, 2010 – Hoffman, Bateson, Ikeda e Camponar.

4. Marketing para o século XXI – Ediouro, SP, 2009 – Philip Kotler.

5. Marketing e Gestão Estratégica de Serviços de Saúde – Thomson, SP, 2008 – Edmir Kuazaqui e Luiz Carlos Tanaka.

Bald people, unite. You are being deceived, tricked, and cheated all over the world.



Dr. Carlos Eduardo Leão
Founding member of ABCRC and former president of ABCRC. Specialist in Plastic Surgery and Hair Loss Surgery
CRM 14.076
RQE 1862

Writing about "baldness" is always popular because it arouses great interest in at least half of the men on Earth who already suffer or will inexorably suffer from the problem that came into existence shortly after Adam bit the apple.

No, no, no! You folks do not understand. Apples do not cause baldness, but that bite made Adam a sinner, a mere mortal subject to developing and passing on to his descendants this clinical entity that has become, throughout history, man's greatest aesthetic trauma of all time.

In ancient history, Cleopatra prepared potions based on the urine of the Naja snake, which she mixed with native seaweed to form a stew that she applied every night to the bald spots of the Roman general Mark Antony, her great love, to revitalize his thinning hair. A homemade type of Capiloton or Vincentian Lotion from Moeda at the time.

In contemporary history , the composer Roberto Roberti composed the famous carnival march "Nós os carecas" ("We the bald ones") with the catchy refrain "it's the bald ones they like best". Let us face it, but this statement is a conversation for the bull to sleep, highly suspicious and with total conflict of interest, since the composer had a lustrous bald head.

A side note: I confess that I find the term "bald" pejorative and rude. It looks inelegant, I would say. Although immortalized from north to south by popular culture and not bothered, for now, by the new world order of gender nomenclature, I confess that I prefer the terms "bald and bald" before "calves" becomes predominant due to the demands of idiots, increasingly on the rise in the four corners of the world.

Although the great evolution of hair restoration brought about by the FUE technique is a reality, its situation in the world is not the best. Today there is an unprecedented invasion of the specialty in the history of Medicine. Everyone wants to be a "baldness surgeon".

If this "everyone" were only doctors, even without training in the art, it would be very acceptable because of the Brazilian legislation that allows medical graduates to do what they want in their profession. If you make a mistake, however, and do not have a specialist title in what you are undertaking, the problem is with the Brazilian



Federal Council of Medicine (CFM) and the Justice system.

To make matters worse, different non-medical professionals working in the health area are venturing into Aesthetic Hair Transplant. Even worse are the complaints that technicians, tattoo artists and hairdressers are joining the "gang" in a flagrant illegal medical practice. And this phenomenon is a global problem, that does not seem to concern official health authorities much, despite repeated complaints from Specialty Medical Societies around the world.

Hair restoration is not just about putting hair on bald people's heads. It is a specialty that treats a wide range of scalp problems, whether genetic, clinical diseases, tumors, trauma, or burns. Baldness, bald spots or lack of beard and eyebrows are just part of this broad field of action with a colossal technical scope.

Far from being characterized as a "market reserve," Hair Restoration, historically in the hands of plastic surgeons and dermatologists for over 70 years, is a basic medicine, subject to complications inherent to its practice, requiring professionals to have the competence to treat them.

That said, it is worth warning the population in need of careful when choosing their profession. Medicine is a serious matter. It is not an adventure. If you do it, you could get stigmata. These are marks that damage the body and soul.

SMART
Hair Implanter



PERMITE A INSERÇÃO ATRAUMÁTICA DOS FOLÍCULOS

MAIS CONTROLE & PRECISÃO

DISPONÍVEL EM 6 TAMANHOS, PONTA ROMBA OU AFIADA COM CANAL LARGO, PARA ADAPTAÇÃO TOTAL.

SAIBA MAIS SOBRE NOSSOS PRODUTOS AQUI!

+55 (19) 98993-7706

@SMARTHAIRIMPLANT
@AMERICANINSTRUMENTS

WWW.AMERICANINSTRUMENTS.COM.BR