



Challenges in hair transplantation practice as a beginner

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Introduction

Hair transplantation is a procedure that is steadily gaining popularity in dermatology practice in the recent times. Hair transplantation is both time-consuming and tedious. Before starting a hair transplant practice, efficient training is a pre-requisite. A long-term approach, ethical practices and the right surgical principles are essential to become a successful hair transplant surgeon.

In this competitive era, established surgeons are doing more than 3000-4000 grafts in one session, as they have a good, skilled, surgical team comprising of hair transplant surgeons, anesthesiologists and a few paramedics. This article enumerates challenges, the beginners might have to face while setting up a hair transplantation practice.

Challenges in Setting Up Hair Transplantation

Practice are as follows

Competition in the field

Hair transplantation practice is considered to be a lucrative practice option.¹ In the current scenario, even spas, corporate setups and non-medicos are entering this field and converting it into a business. Therefore, a beginner should always keep in mind that he or she has to survive through the competition, while practicing with ethics.

Training

Hair transplantation is a technique, highly dependent on skill and labor. Hand and eye co-ordination are utmost essential. It cannot be learned by watching workshops, listening to

lectures or seeing videos on social media. There are very few centers which offer good training. Besides, the course fees are usually very high. Hence, a beginner may find it difficult to get proper training from skilled experts.

Skill of the surgeon

Follicular unit extraction and follicular unit transplantation are skill-based techniques. In follicular unit extraction, individual follicular grafts are extracted from the occiput and implanted individually on the recipient area, under tumescent anesthesia. In follicular unit transplantation, a strip is surgically removed from the mid-occiput, slivered into separate follicular units by a paramedic or a surgeon and implanted onto the recipient area. Follicular unit extraction can be performed alone with very few nursing staff but follicular unit transplantation requires a trained doctor who is skilled in slivering follicular grafts from the strip, under magnification. The skill of the surgeon can be assessed by certain factors- such as the follicular unit transection rate, implantation time, hairline designing, patient selection, body hair transplantation and ability to perform follicular unit extraction on different types of alopecia, e.g., androgenetic alopecia in men and women, cicatricial hair loss, facial hair restoration and so on. Therefore, practice is the only key to develop these skills.

Follicular unit transection rate

The accuracy of follicular unit extraction technique is determined by keeping a low follicular unit transection rate. The follicular unit transection rate is defined as the number of grafts transected for every 100 grafts extracted. The aim

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should be to acquire optimum hair growth by keeping the follicular unit transection rate, less than 1%.² This determines the precision of the operating surgeon. To avoid transection, beginners can use a blunt punch and attain good depth control and practice proper positioning of the patient and surgeon, i.e., the prone position of the patient while performing follicular unit extraction on occiput and lateral posture while performing follicular unit extraction on temporo-parietal areas.² Traction and counter-traction on the lax scalp helps improve accuracy.³ In case of follicular unit transplantation, slivering of the strip should be done meticulously, under appropriate magnification by a trained surgeon.

Hairline designing

Hairline design is the signature and identity of each hair transplant surgeon. It is of utmost importance and its accuracy is directly proportional to patient satisfaction. It really needs experience to get an efficient and artistic hairline. Beginners should focus upon minute details of surface anatomy and landmarks for designing a perfect hairline, for a natural look. The hairline should be irregularly irregular with a density of 25–30 grafts per cm² as compared to the central tuft. For hairline designing, follicular grafts with 1–2 follicles should be selected for implantation and grafts with 3 to 4 hair should be implanted on the vertex to give a fuller look to the scalp, with a density of approximately 40–45grafts/cm²[Table 1].

Body hair transplant

Body hair grows in different directions, lie in the upper dermis which has dense collagen and therefore, extraction is more difficult as compared to scalp hair. Body hair is utilized when the safe donor zone of scalp is exhausted. In such situations, body hair from chest, legs, beard and moustache area, axillae or pubic hair are used for transplanting onto the scalp. Beginners should focus on scalp hair transplantation techniques and on lower grades of androgenetic alopecia initially and when they acquire the necessary expertise, should add more indications of hair transplant to their skills portfolio.

Anesthesia for hair transplantation

Anesthesia can be performed via various techniques with or without nerve blocks, followed by ring block and infiltration:

1. Nerve blocks such as supraorbital and supratrochlear blocks given with 2% lignocaine with adrenaline
2. Ring block along the periphery of the recipient area with 2% lignocaine and adrenaline

3. Tumescant anesthesia is given after ring block in the recipient area. Tumescant anesthesia is made with triamcinolone (40mg/ml) + xylocaine (2%) + epinephrine, 1:1000 (1mL) + normal saline (100mL)

A beginner needs to learn the right technique of using tumescant anesthesia for hair transplant surgery. Tumescant anesthesia comprises of subcutaneous injections of relatively large volumes of diluted lignocaine and epinephrine. Authors prefer to use lower concentrations of epinephrine or adrenaline in the tumescant mixture while doing hair transplantation surgery, as it may lead to acute loss of hair follicles post-surgery. Besides, triamcinolone acetone (40mg/mL) can be added to the tumescant solution to avoid post-operative edema and inflammation.

Slit-making

While creating slits for the implantation of follicular units, it is imperative to follow proper angles on different areas of the scalp[Table 1]. Otherwise, it may lead to an unnatural look to the patient. The depth of slit is also equally important as the ‘too deep’ placement of follicular units may lead to folliculitis and ‘cobble stoning’ at the recipient site. Too shallow slits may lead to popping of grafts.⁴

Implantation

For beginners, the graft implantation procedure may require a much longer time as compared to a skilled surgeon. This may lead to lesser yield of surgery because of the longer “out of body time” of the graft. So, it is advisable to take help from a trained assistant. Avoid doing mega sessions in the early phase of practice; beginners can assist senior surgeons in performing and learning mega and giga sessions of hair transplantation.

Case selection

The zest to do many cases along with the financial burden/incentive may force a newcomer to select every patient who asks for hair transplant surgery. Being less experienced in surgery and wrong patient selection- like patients with poor donor area, androgenetic alopecia of Norwood Hamilton grade IV or more, or medically unfit patients- may result in an unsatisfactory outcome or may lead to complications like failure of surgery, dermatosurgical emergencies, patient dissatisfaction etc., A complete preoperative dermatological evaluation to determine the type of alopecia and preanesthetic medical fitness is a must to avoid these untoward complications.

Hair transplant in women

Surgical management of patterned hair loss in women is challenging as it is multi-factorial and poorly defined. Hair loss in women can be chronic telogen effluvium presenting as diffuse thinning of hair. Post operative shock loss, being common in female patients, results of hair transplantation in women are often delayed. Hence, beginners are advised not to venture upon operating female patients with hair loss at the start of their career.

Table 1: Recipient area and angles while making slits⁴

Recipient site	Angle of slit	Follicular units density	Pattern
Frontal hairline	Acute <45°	20-30 grafts/cm ²	Irregularly irregular
Temporal areas	Acute <45°	30-35 grafts/cm ²	Radial pattern extending outwards or patient’s natural pattern of hair-angles
Vertex	45°	40-45 grafts/cm ²	Whorled pattern

Scarring alopecia

Scarring alopecia is another area where one needs expertise to perform hair transplantation. Beginners should avoid altogether or perform hair transplantation in scarring alopecia under the supervision of experienced surgeons due to the variable factors such as underlying disease pathology, cause of scarring, fragile tissue, activity in the diseased patch as reported in the histopathological examination, possibility of koebenerization, skin texture and condition of underlying dermis or subcutis.⁵ The chances of graft survival are low in scarring alopecia as the blood circulation is compromised due to lesser vasculature.⁵

Establishing Hair Transplant Setup

While setting up a hair transplant clinic one needs to have:⁶

- A good location
- Updated instruments
- Comfortable infrastructure
- Signboard, Logo, impressive interior and entrance
- Comfortable operative table and set up (multiparameter pulse oximeter, hair transplant OT bed, OT lights, comfortable stools and chairs).
- Anesthesia trolley and crash cart including emergency drugs (adrenaline, atropine, dopamine, sodium bicarbonate, IV fluids etc), Ambu bag, intubation equipment and oxygen supply.
- A trained team of doctors (one to two hair transplant surgeons, anesthesiologist) and paramedics
- Autoclave
- Marketing strategy
- Financial aid.

Developing a team

Hair transplantation is a team work and the results are directly dependent on the quality of the work of the staff. Getting full time, dedicated and skilled staff for hair transplantation is difficult. Training, multitasking and maintaining the team are again, challenging things.

Preoperative evaluation

Preoperative evaluation in the form of trichoscopy or histopathology (wherever indicated) to determine the type of alopecia (scarring/nonscarring), assessment of the grade of androgenetic alopecia, pre-anesthetic fitness, evaluation of comorbid conditions etc., helps a surgeon to practice safely with optimum results.

Preoperative documentation

Documentation and record-keeping play a pivotal role in any dermato-surgical practice. An informed written consent form, pre-operative information sheet of do's and don'ts for the patient, pre-operative checklist mentioning details about pre-medication and postoperative notes and advice with follow-up sheet with all postoperative drug list with appropriate doses; is mandatory. Clinical photographs before surgery and during each subsequent visit are crucial for tracking improvement in hair growth.

Achieving patient satisfaction

Achieving patient satisfaction is one of the most difficult jobs. Optimum patient selection and good accuracy in hair transplant surgery is the key to achieve ultimate patient satisfaction.

Dealing with complications and emergencies

Patients must undergo a pre-anesthetic fitness. A thorough trichoscopic evaluation is a must to rule out other causes of alopecia such as alopecia areata, frontal fibrosing alopecia etc., He/she must be properly treated for the basic underlying or associated comorbid ailments. A surgeon must be well-trained in basic life support techniques and should be capable of managing dermatosurgical emergencies such as vasovagal syncope, anaphylaxis, lignocaine toxicity etc., Mega-sessions are a bit riskier as they require a large amount of anesthetic agents and are associated with more fluid and blood loss. So, it is best to avoid mega and giga sessions in the initial phases of practice. A senior doctor proves to be of great help in the initial phases. It is safe to have an anesthesiologist attending the surgery to manage complications.

Marketing/publicity

There is an increasing demand for publicity and marketing on social media as well as print media. People are nowadays hiring marketing teams for clinic advertising. A beginner may not be able to invest in the early phase. Mouth-to-mouth publicity by the satisfied and happy patient is the best marketing tool for a beginner. In an attempt to attract more patients, a doctor should be particularly careful to avoid unethical advertisements and fake commitments like unlimited grafts, 100% guarantee of hair growth and so on.

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References

1. India a potential market for hair restoration services. The Hindu business line. Available from: <https://www.thehindubusinessline.com/news/india-a-potential-market-for-hair-restoration-services-survey/article20703954.ece1>. [Last published on 2013 Dec 25; Last accessed on 2020 Mar 10].
2. Dua K, Dua A, Chahar M. Dos and don'ts of follicular unit extraction. In: Mysore V, Sattur S, Garg A, Dua K, Patwardhan N, editors. Hair Transplantation. New Delhi: Jaypee the Health Sciences Publisher; 2016.p. 205-12.
3. Kerure A, Rohatgi S, Patwardhan N. Kerure clamp: A new age tool to improve extraction technique in follicular unit extraction. *J Cutan Aesthet Surg* 2019;12:141-4.
4. Marwah M K, Mysore V. Recipient area. *J Cutan Aesthet Surg* 2018;11:202-10.
5. Bhushan R K, Mysore V. Hair transplantation for scarring alopecia. In: Mysore V, Sattur S, Garg A, Dua K, Patwardhan N, editors. Hair Transplantation. New Delhi: Jaypee the Health Sciences Publisher; 2016.p. 353-6.
6. Rajendra S C, Omprakash H M. Standard guidelines for setting up a dermatosurgery theatre. *IJDVL*2009;75:76-82.