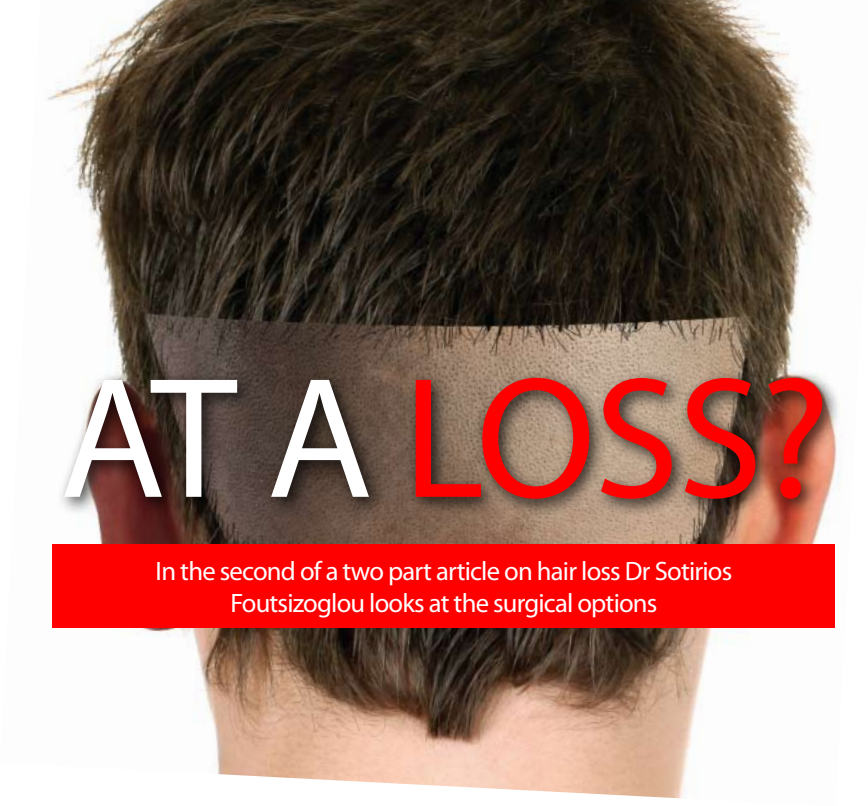

# AT A LOSS?

In the second of a two part article on hair loss Dr Sotirios Foutsizoglou looks at the surgical options

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## Hair transplant surgery

Hair restoration surgery has gone through a vast array of changes since its introduction by Japanese dermatologist Okuda in 1939.

Hair transplant surgery is becoming increasingly popular in the UK. A number of celebrities including Wayne Rooney, Jason Gardiner, etc have publicly admitted to having undergone hair restoration surgery. Nowadays hair transplantation is considered safe and new techniques and equipment have been devised in order to give a naturally looking, permanent and aesthetically pleasing result. It is worth mentioning that with new transplanting techniques the hairline no longer appears pluggy or “Barbie doll hair” or “corn rows” as much smaller grafts are used. In addition, experienced surgeons achieve more than 90% survival of transplanted grafts producing a substantial cosmetic improvement.

The goal of modern hair transplant is to re-establish the aesthetic balance lost in the hair thinning process. A successful surgical outcome restores the aesthetic function of scalp hair which is complimentary to the other facial features giving the appearance of a natural, pleasant and balanced whole.

There is no upper limit above which surgery should be denied, unless there is a medical condition that may compromise the safety of the patient. A family history of complete baldness should be a contraindication to hair transplantation, especially if the patient presents at a young age. Every patient should be assessed on an individual basis including a psychological evaluation in order to detect any signs of body dysmorphic disorder or unrealistic expectations.

Nowadays patient satisfaction is more than 90% provided that potential candidates for hair restoration surgery are carefully selected and an excellent channel of communication has been established between the doctor and the patient. It is very important to explain clearly to patients the anticipated course of their hair loss, the limited amount of donor hair available, and the need to maintain realistic goals. Even when surgical technique and hair survival is excellent, the patient may be dissatisfied because of poor communication and mismatched expectations. We, as doctors, have the moral and legal obligation to act in the patient’s best interests even if that means going, sometimes, against patients’ desires and wishes with regards to density and design.

Fig.3. Strip Method: A) During donor strip harvesting and B) immediately after a two-layer closure of the resulting scalp skin defect

## FUE versus FUT

The most commonly performed techniques in hair transplantation are the,

- Strip Method (or FUT) where the surgeon applies local anaesthetic to the donor area he/she wants to take the hair from, usually the occipital “permanent” zone, and then a thin strip of hair bearing skin is removed which is subsequently slivered under the microscope into follicular grafts. These follicular unit grafts are then placed into pinprick incisions in the recipient area. The strip method of hair transplants is the “Gold Standard” as the most effective technique for transplanting hair and donor utilisation.

- FUE which stands for Follicular Unit Extraction. This technique uses a microscopic biopsy punch to remove individual hair grafts, in the same way as an apple corer removes the core of an apple. FUE is a relatively new technique, and only really established itself in the early years of this century.

| FUE | FUT |
|---|---|
| No linear scar | Yields high quality grafts from the permanent zone |
| Important for those who wear their hair very short | Smaller donor region is required for sufficient number of grafts |
| Decreased healing time in the donor area | Less follicular transection (damage to grafts) compared to FUE |
| Less post-op discomfort in the donor area | Since the extraction process is quicker than FUE, smaller procedures are needed to get an equal amount of grafts when compared to FUE |
| Provides an alternative when the scalp is too tight for a strip excision | Less costly procedure for the patient |
| Makes it possible to harvest non-scalp hair (e.g. beard or body hair) | |

Fig.4. FUE: A) Transplanting into thinning frontal area and hairline B) During graft extraction

## Comparison between FUE and FU

**Less popular types of hair restoration surgery includes:**

- Frechet Scalp Reduction performed mainly on the crown area of the scalp, or 'the monk's bald spot'. In this procedure, the bald skin on the crown is removed and the hair bearing sides of the scalp above the ears are drawn together. This procedure usually requires three steps whereby some of the bald area is excised after skin has been stretched by using a Frechet extender (a thin sheet of silicone elastomer) affixed to galea for four weeks and finally a transpositional flap is used to relocate the final scar and hair direction into the classic crown swirl.

- Scalp Expansion Surgery involves stretching the scalp with a silicone balloon under the skin over a period of weeks before the bald scalp tissue is surgically removed. This stretching results in increased elasticity of the scalp and the ability to remove more balding scalp. The scalp expansion procedure requires two procedures – one for inserting the expanding balloon and the second for its removal along with the excess loose bald skin.

- Scalp flap surgery is a method of moving a hairy "flap" of scalp skin and underlying tissue to a bald area. This is a highly skilled surgical procedure which can be performed for both reconstructive and cosmetic reasons.

## Hair transplant surgery for women

Contrary to the common belief the majority of women with FPHL are good candidates for hair restoration surgery. However it should be noted that women have, generally speaking, smaller and thinner donor areas than those found in men's "safe" donor zone and therefore lower graft densities should be used in order to produce satisfying results in women. Even in high grades of FPHL (Fig. 5), unlike men, women preserve their hairline. Hence it is well accepted that smaller operations for women confined to an area just behind the hairline, to reduce the "see-through" effect of thinning is more advantageous and cosmetically pleasing.

Fig.5. Ludwig pattern of hair loss in women

## Tips to remember

It is now widely accepted that follicular unit transplanting (FUT) at densities up to 30 FU/cm2 usually carry minimal risk of causing any post-op complications including "shock loss" involving the pre-existing hair of the recipient area – if any –within the first two or three weeks after a transplant. Recipient FU density of 25-30 FU/cm2 usually produces a satisfactory result for most patients. When FUT strip-graft numbers exceed 3,000, problems with the wide donor site scar and recipient site necrosis become more common. Moreover studies have shown that transplanted hair survival is diminished if grafts are planted too closely together, probably due to the extra trimming that grafts may need to undergo to fit in a tighter space. Excessive trimming leaves follicles vulnerable to injury. The FUE technique leaves only tiny scars, however when pushed to the limit, the cumulative tissue trauma and fibrosis (i.e. scarring) becomes a serious obstacle to a satisfying result. In addition, "megasessions" associated with the use of large numbers of grafts, leave less permanent donor hair in reserve for a potentially growing area of MPB. Dissecting white or light-grey hair into follicular units is extremely difficult. White hair is transparent and can be easily injured during the sectioning of the tissue in the delicate process of preparing follicular units. UV light, methylene blue, hair dye, or more recently a FDA-approved product called Meladine have all been used in an effort to reduce transection rate in white hair transplantation.