

A Treatment Based, Multi-Specialty Skin Classification System. Clinical Guidelines for Assessing Skin Response to Cosmetic Treatment

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Abstract

The Fitzpatrick Skin Types [1], type skin in relation to sensitivity to ultraviolet radiation and risk of developing skin cancer. The many skin type classifications have been summarized by Roberts [2]. Roberts recognized the inability of the Fitzpatrick Types I-VI to reflect the response to the three i's, insult, injury and inflammation, particularly in the specific situations of laser and surgery. However, the Fitzpatrick System is the primary system in use for predetermining skin response in the field of cosmetic skin treatments. The Fitzpatrick System has a demarcation in terms of treatment parameters between Type III and Type IV. However, Type III may react as a Type IV. Categorizing the patient in the wrong Fitzpatrick Skin Type may lead to using inappropriate treatment settings. A new simple Skin Type Classification is proposed to allow fast and efficient Skin Typing with less risk of setting overly aggressive treatment parameters.

Introduction

The Fitzpatrick (Fz) Skin Types described in 1975 [1], type skin in relation to sensitivity to ultraviolet radiation and the risk of developing skin cancer. It is a tool familiar to dermatologists. The Fitzpatrick System was designed to evaluate and analyze skin cancer risk based on different types of skin pigmentation and response to ultra-violet radiation. The many skin type classifications have been summarized by Roberts [2]. Roberts recognized the inability of the Fitzpatrick Types I-VI to reflect the response to the three i's, insult, injury and inflammation, particularly in the specific situations of laser and surgery. Roberts proposed a two-part classification with 6 levels of increasing propensity for pigmentation H0-H6 and 5 degrees of increasing scar response S0-S5.

The Fitzpatrick System is the primary Skin Classification System in use today for predetermining the response to the three i's; in the ever-expanding and ubiquitous field of cosmetic skin treatments. Treatments are performed by a spectrum of operators from specialist and non-specialist physicians to ancillary medical staff and spa employees with no medical training. Moreover, medical lasers and other skin treatments such as Chemical Peels, Intense Pulse Light (IPL) and Light Emitting Diode (LED), are used in many different settings and for a multitude of therapeutic

indications from hair removal to skin resurfacing. They all have, as a common denominator, the risk of injury, insult and inflammation to the skin with potential sequel such as hyper-pigmentation and scarring. One of the primary difficulties in the use of the Fitzpatrick System is that there is a dividing line in terms of treatment parameters between Type III and Type IV. This is an artificial distinction, since Type III may react as a Type IV to the three i's. Categorizing the patient in the wrong Fitzpatrick Skin Type may lead overly aggressive treatment settings. There is also the issue of variation in typing between different operators, whether they are physicians or non-physicians. Even dermatologists are not consistent in their skin typing.

Against this background and in an effort to streamline and simplify the process thereby avoid mistakes in skin-typing, a new skin classification system is proposed in which patients fall into one of two groups.

Group A: white skin with minimal hint of pigmentation (Germanic-Northern European/ Scandinavian) behaving as Fz Types I and II.

Group B: Everybody else (Mediterranean, Olive, East and West Asian, African etc.). These skin types encompass all Fz Skin types from III-IV. There will of course be patients who are indeterminate

e.g. light Mediterranean, olive; falling between Group A and B. These patients are treated initially as Group B with less aggressive treatment parameters increasing thereafter to more aggressive settings with subsequent treatments, depending on the response.

In terms of skin response to Laser, IPL and chemical peel the critical distinction is between patients with little or no risk of hyper pigmentation and keloid scarring and the remaining patients who are at risk of post-inflammatory hyper-pigmentation and scarring after cosmetic skin treatments.

Conclusion

Attempting to ‘skin type’ patients according to the 6 Fitzpatrick skin types is subject to error, confusing and most importantly can and does lead to mistakes in evaluation when patients fall into the borderline demarcation between Fz Types III and IV. Decisions depend on the operator as to whether to put the patient in Type III or Type IV. Mistakes in categorizing the patient into the correct Fz Skin Type may result in the patient being treated too aggressively. Treatment parameters may differ significantly depending on whether a patient is placed into Groups I-III versus IV-VI. There-

fore, it is proposed that instead of trying to parse the difference between a Fitzpatrick III or IV, that we simply put Fz Skin Types I & II into one group called Group A and everyone else into another group called Group B, based on the K.I.S.S. principle.

Not with standing any of the above, it is incumbent on the operator to

- Evaluate the patient carefully, ruling out any pre-existing conditions or medications that may contraindicate the specific treatment modality.
- Choose the appropriate treatment for the skin type
- Begin with lower settings or a test area and then increase the settings with subsequent treatments.

References

1. Fitzpatrick TB (1988) The validity and practicality of sun-reactive skin types I through VI. *Arch Dermatol* 124: 869-871.
2. Roberts WE (2008) The Roberts Skin Type Classification System. *J Drugs Dermatol* 7: 452-456.