



# CHAPTER 1

## The concept of beauty

*Pier Paolo Rovatti*

When searching the Treccani Italian Encyclopedia, *beauty* is defined as the “quality of what appears or is considered beautiful for senses and soul.” Its etymological root is from Latin, and the entry continues to refer to the conception of beauty as order, harmony and proportion. Later, the notion of beauty became an autonomous category, characterized by the power of beauty to be perceived by the senses. It is absolutely true—beauty is something that affects us deeply and we perceived it almost instantly. When we see something “beautiful,” our mind is ravished, misled, distracted, and, therefore, our subjective idea of beauty always means an involvement of the senses.



Since time immemorial, artists have searched for and realized in their paintings and sculptures a beauty ideal understood precisely as harmony and proportion. These ideals have changed over time and vary among people due to historical and cultural contexts and socioeconomic situations, but the common ground that joins all humans across the ages and geographical origins is exactly the search for beauty, in the sense of making people more attractive and desirable. We can find beauty in the various expressions of art, but also in our daily life, from how we dress and how we make ourselves up to be more attractive, to improve ourselves in the eyes of others and in our own eyes when we look in the mirror or when we post our photos on social media.

Cosmetic surgery and aesthetic medicine—aiming to improve one’s appearance, making a face and/or body more beautiful—have necessarily changed over time to keep up with the changes in beauty standards. Moreover, societal changes have certainly helped by contributing innovative technology, materials, and devices. Doctors who approach aesthetic medicine and cosmetic surgery are used to studying beauty standards and the so-called golden proportions. However, a doctor of aesthetic medicine must also be an artist who understands what a face or body needs to become more attractive, to be valued, and, therefore, to become more “beautiful,” always having as a reference the previously mentioned idea of harmony and proportion.



Italians are surrounded by works of art, landscapes, and places that have become a reference for “beauty” for the entire world. This innate ability to portray “harmony and proportion” can be found in old and modern architectural examples, in fashion, in





## 2 Attractiveness: a worldwide multimodal strategy

the kitchen, and last but not least in aesthetic medicine. The idea of aesthetic medicine and cosmetic surgery as an improvement and not a distortion of the features—an enhancement of a person’s distinctive attributes and not a homogenization to the golden proportion—serves as a reference for doctors all over the world. Indeed, Italian doctors are often invited abroad to discuss their experiences and expertise.



This book represents a collection of how beauty and, consequently, aesthetic medicine and cosmetic surgery are interpreted throughout the world. Indeed, opening the mind to other experiences always leads to cultural and professional growth, providing a stimulus to do better while respecting that “harmony and proportion” must be our daily inspiring principles. This makes us creators of beauty and therefore artists, respecting and preserving the uniqueness of each of our patients.

### Beautification: an easy treatment in worldwide faces

Aesthetic medicine has grown of numbers over the past years (Figure 1.1).

Aging is a complex result of fat volume loss, bone resorption, and skin laxity due to collagen and elastin breakdown. Aging of the skin can be determined by intrinsic and extrinsic factors and obviously people living in high UV exposed will have more skin aging, therefore they will need different and specific treatments.



All of this problems can be repaired in less invasive way than aesthetic surgery.

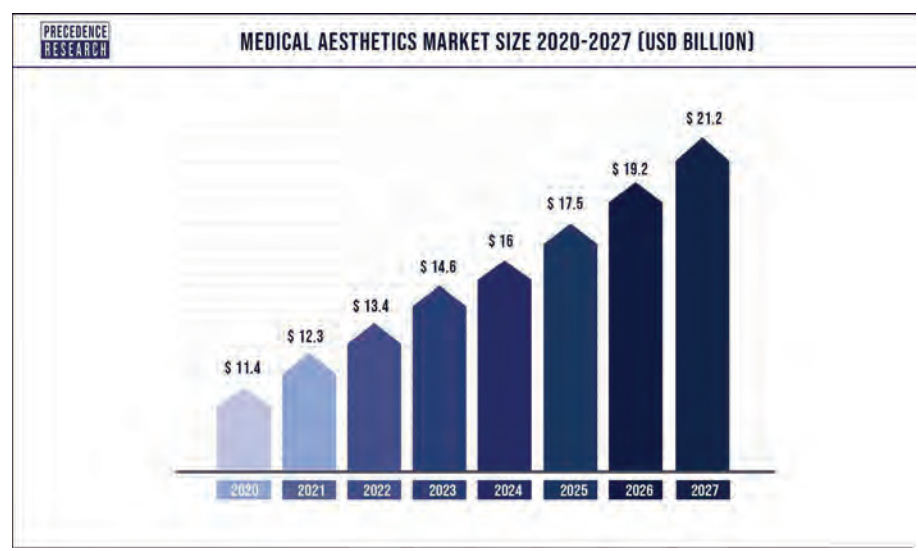
Also people in the last years ask us less invasive treatments and prefer the use of dermal fillers and skin energy based devices for a natural youthful appearance, instead of surgery.

Patients now prefer a light volumization with skin tightening effect and skin texture improvement and this is the goal of aesthetic medicine in recent years (Figure 1.2).

We can restore a youthful face and get a beautification in a less invasive way by improving volume and focusing on facial shape, proportion and skin quality.



Popularity of dermal fillers, showed by the great numbers of treated patients worldwide, has increased the treatment options and combination of EBD, botulinum toxin and all the non invasive options.



▲ Figure 1.1. Medical aesthetics market size 2020-2027 (USD billion).



▲ Figure 1.2. Skin rejuvenation: 6 months after 2 treatments of CaHA (Radiesse) without volumization.

This fact has led worldwide of an ever expanding list of dermal fillers for facial ageing and development of many energy based device (EBD) for skin and subcutaneous treatment.

Dermal fillers are a large category of implantable medical devices that significantly differ for rheology, interaction with tissues, chemical proportion, composition, and duration.

Most of them are based on hyaluronic acid (HA) but we know that some implantable product can also biostimulate collagen and regenerate tissue like calcium hydroxylapatite.

Now we are discussing on a facial no-invasive lift and we can use this dermal filler on full face to create many effects like non excessive volumization, a lifting capacity more than HA, a skin rejuvenation effect modulated by collagen induced production, a great longevity of the result and the power of contouring.

CaHA (Radiesse) is an implant with an high effectiveness for many areas of the face with a high safety profile and a FDA approval. It is a filler with high viscosity and high elasticity compared with all other fillers and the characteristics are able to determine a lifting effect with light volume and a nice skin texture due to the collagen stimulation.

The treatment is effective in any face area, upper third, medium and lower third. Age estimation and perceived attractiveness can be influenced by treating with this filler.

After 15 years of CaHA (Radiesse) use, now this dermal filler is the 10<sup>th</sup> non invasive treatment in USA for U.S ASAPS statistics.

The increasing interest in aesthetic medicine and technological innovation have made very effective equipment available in recent years, which increasingly supports the aesthetic doctors in clinical





4 Attractiveness: a worldwide multimodal strategy



▲ Figure 1.3. 3 months after modification of face shape with HIFU and filler.



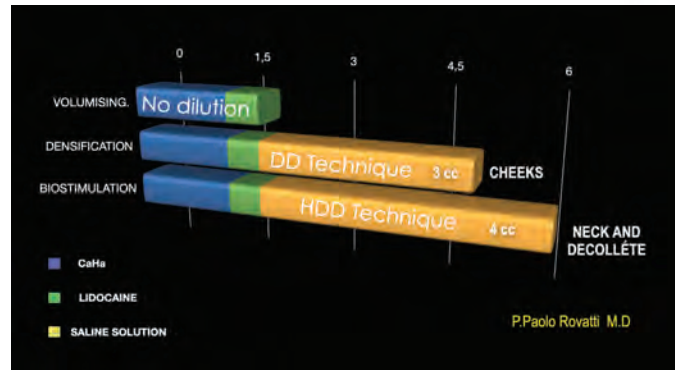
▲ Figure 1.4. Acne scars after 2 treatments with CaHA (Radiesse) and Morpheus8®.



practice. Some of these treatments in particular make it possible to enhance the results obtainable with injections alone. Two examples of cutting-edge methods are HIFU (microfocused ultrasound) and Ulthera® is one of the most significant examples. Ulthera® is the forerunner of HIFU technology useful in situations of moderate laxity, in particular of the lower third of the face, because thanks to the progressive tissue shrinking, it favors the redefinition of the oval (Figure 1.3).

The role of Calcium Hydroxylapatite in non surgical rejuvenation has been widely described in more than 200 papers.

The collagen-stimulating properties of CaHA (calcium hydroxylapatite), Radiesse® could be used for skin-tightening procedures but hyperdiluting the product with lidocaine and saline solution ensure a greater diffusion losing some properties.



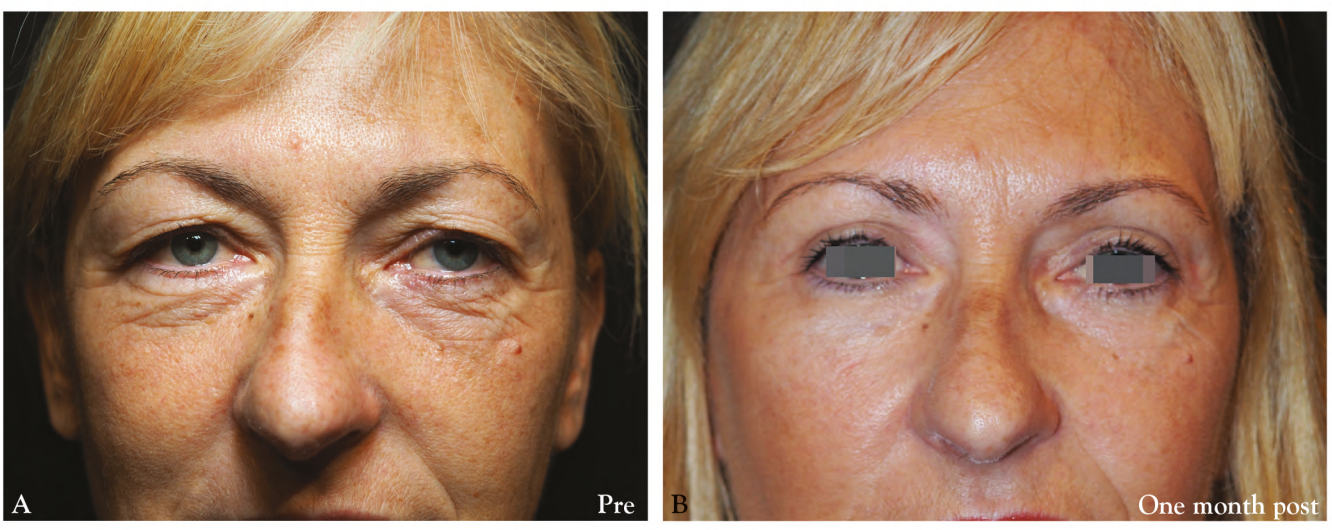
◀ Figure 1.5. Different dilutions CaHA (Radiesse).



▲ Figure 1.6. 3 months after biostimulating filler (Radiesse) using hyperdilution.



6 Attractiveness: a worldwide multimodal strategy



▲ Figure 1.7. One treatment only with Morpheus8® on lower lids.



▲ Figure 1.8. Full face combination treatment CaHA (Radiesse) and Morpheus8® - 6 months.



▲ Figure 1.9. A) Before treatment; B) after combination of FaceTite® (lower third) and Radiesse® treatment on medium third.

Hyperdiluted CaHA (Radiesse) has demonstrated more efficacy (statistically significance) *vs.* pure product to reduce superficial wrinkles and acne scars (Figure 1.4) due to a greater biostimulating effect (Figure 1.5).

I used for the first time worldwide Calcium Hydroxylapatite hyperdiluted in 2013 (paper and master's thesis highlighted) achieving a great rejuvenation effect. I am using it yet, getting a great satisfaction. The results effectively demonstrate that hyperdilution is an innovative and positive evolution in CaHA (Radiesse) filler delivery (Figure 1.6).

Great interest today is aroused by equipment with radiofrequency emission, capable of counteracting tissue sagging and promoting the improvement of skin texture. Among the radiofrequencies, the most modern, effective and safe device today is undoubtedly Morpheus8®, a bipolar radiofrequency with needles, which combines microneedling and thermal stimulation with amazing results in improving the firmness and quality of the skin (Figure 1.7).

The ability of the aesthetic doctor is to know how to compose tailor-made treatments where injection treatments and technologies are combined according to the degree of aging, the skin characteristics and the type of patient. It is appropriate to say that unity is strength and the association of various techniques guarantees optimal and long lasting results (Figure 1.8).



A previous injection with Hyperdiluted Calcium Hydroxylapatite (Radiesse®) and after 30-40 days a treatment with fractional bipolar microneedling (Morpheus8®) can lead to an effective improvement of the skin, achieving a rejuvenation (Figure 1.9).<sup>1-10</sup>



## References

1. Aesthetic Medicine / Volume 8 / No 1 / January/March 2022 Systematic review of the literature on the properties, quality and reliability of calcium hydroxyapatite: results of an Italian experts' meeting Emanuele Bartoletti, Fabrizio Melfa, Massimo Renzi, Pierpaolo Rovatti
2. Rovatti P, Pellacani G, Guida S. Hyperdiluted calcium Hydroxylapatite 1:2 for mid and lower facial skin rejuvenation: Efficacy and safety. *Dermatol Surg* 2020;46:e112-e117.
3. Muti G, Astolfi G, Renzi M, *et al.* Calcium Hydroxylapatite for augmentation of face and hands: A retrospective analysis. *Italian Journal of Drugs in Dermatology* 2015;14:948-54.
4. Graivier MH, Bass LS, Busso M, *et al.* Calcium hydroxylapatite (Radiesse) for correction of the mid- and lower face: consensus recommendations. *Plast Reconstr Surg* 2007;120(Suppl 6):55S-66S.
5. Yutskovskaya YA, Kogan EA. Improved neocollagenesis and skin mechanical properties after injection of diluted calcium hydroxylapatite in the neck and décolletage: a pilot study. *J Drugs Dermatol* 2017;16:68-74.
6. Berlin AL, Hussain M, Goldberg DJ. Calcium hydroxylapatite filler for facial rejuvenation: a histologic and immunohistochemical analysis. *Dermatol Surg* 2008;34(Suppl 1):S64-S67.
7. Holzapfel AM, Mangat DS, Barron DS. Soft-tissue augmentation with calcium hydroxylapatite histological analysis. *Arch Facial Plast Surg* 2008;10:335-8.
8. Carruthers J, Cohen SR, Joseph JH, *et al.* The science and art of dermal fillers for soft-tissue augmentation. *J Drugs Dermatol* 2009;8:335-50.
9. Marmur ES, Phelps R, Goldberg DJ. Clinical, histologic, and electron microscopic findings after injection of a calcium hydroxylapatite filler. *J Cosmet Laser Ther* 2004;6:223-6.
10. Emer J, Sundaram H. Aesthetic applications of calcium hydroxylapatite volumizing filler: an evidence-based review and discussion of current concepts: (part 1 of 2). *J Drugs Dermatol* 2013;12:1345-54.