Editorial

Surgical education in rhinoplasty: not seeing the forest for the trees

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Rhinoplasty is generally viewed as the most complex surgical procedure in facial plastic surgery. Above all facial plastic surgery operations, rhinoplasty is the most intimately tied with the otorhinolaryngology field. What makes the art of rhinoplasty unique compared to other facial plastic surgery procedures is the key role of the nose in both appearance and form. The astute rhinoplasty surgeon must be aware of the vital functional role of the nose so he/she may either correct a pre-existing functional problem or avoid to create a post-surgery damage of nasal functions.

The logarithmic growth of rhinoplasty over the past 20 years has transformed the status of rhinoplasty from a specialized operation into a cultural phenomenon with millions of operations *per annum* in all 5 continents.

In the hands of experienced surgeons, rhinoplasty can be a most rewarding operation for the surgeon and the patient. However, it can also darken the life of both parties if the results are not to the patient's satisfaction.

Rhinoplasty, both in its primary and revision forms, presents a mine-field of problems:

1- The expansion of rhinoplasty and facial plastics both as a scientific and technological practice has had difficulty keeping up with the numbers of patients and the increasing demands for perfect results.

2- Rhinoplasty and Facial Plastics education programs are largely limited to North America and Europe, although the demand for facial plastics outside these areas is greater than ever. This has immense implications for the training of facial plastics surgeons as travelling fellows, or teachers of rhinoplastic surgery creating educational programs in centers outside Europe and North America.

3- The scientific basis of facial plastics is lacking in large studies with adequate meta-analysis and guidelines. Multidisciplinary teams in facial plastics

are only starting to make an impression in limited geographical regions. The emergence of new technologies has become incredibly difficult to keep up with, and implement. Peer-led guidelines are a logical next step in this area.

4- The training of surgeons and other practitioners of facial plastic surgery needs to reach internationally-agreed standards both in the training and the examination phase. The current “free-for-all” approach leaves patients bewildred and uncertain on how to choose a doctor.

5- Alongside the growth of facial plastics, the downside of increasing medico-legal action, and unhappy patients has opened an unpleasant chapter in the development of our practice and requires guidance, and clarification both in legislation and in the training of doctors.

As facial plastic surgery, and rhinoplasty in particular have become more widely acceptable in all corners of the world, educating an army of capable, safe, and cautious surgeons has created its own problem. The long years of training required to accumulate enough technical expertise to answer most challenges precludes the ability of short courses, the episodic conference attendance, or reading a review article to produce a competent, experienced surgeon. In order to be effective, post-graduate education must be systematic, scientific, peer-led, and reflective. This requires both a major investment in time and educational finances, and a long-term commitment by educators to teach, examine and review results. Continuing medical education, along with mentoring, travelling to various centres of excellence, and attendance at reputable conferences and dissection courses form the backbone of contemporary surgical education. Unless we adhere to these guiding principles, the levels of surgical competence will diminish in quality.

Amongst this ocean of surgical practice, the novice surgeon can be forgiven for not being able to determine which conference or course to attend in order to improve his or her own skills. A sturdy ship and several life-boats must be available before the novice surgeon dares to venture into the tempest.

Let us be absolutely honest: rhinoplasty is a difficult operation that leaves very little margin for error. The learning curve is long, protracted, and not to be taken lightly.

The inherent complexity of rhinoplasty lies not only in the technical, surgical maneuvers necessary to become proficient but also in the judgment that is only acquired from being a dedicatewd student of rhinoplasty. As part of this tutelage, the rhinoplasty pupil must assiduously work over many years

amassing a large number of varied rhinoplasty experiences and must also devotea criticalk eye to follow his surgical resultsover a protracted period of time.

The plethora of websites, patient chat room, and the ubiquitous role of social media has made the life of the rhinoplasty surgeon increasingly difficult, if not at times, impossible. Confounding variables such as the downturn in world economy, and competition to attract patients with various incentives have now muddied an already murky environment.

So, where should a novice surgeon begin in order to ensure patient safety, satisfaction, while delivering the extremely high standards of nasal and facial plastic surgery that patients have come to expect? Above all, surgeons are practical anatomists who apply the latest developments in the science of surgery to their clinical skills. The novice surgeon must start with a firm understanding of nasal anatomy by attending anatomical dissection courses. Although some artificial models provide basic information, nothing replaces the invaluable amount of information that can be gleaned from a dissection course, specifically on fresh, frozen specimens.

The second stage of development should include attendance at a recognised training fellowship programme, possible with qualifying examinations at the end of the apprenticeship. However, a word of caution is necessary: completing a fellowship, and even passing examinations, does not guarantee success as a rhinoplasty surgeon. Once the surgeon has passed these steps, the entrance ticket to the ocean liner can be purchased. This is not a journey that can ever be considered to end or reach completion. Be prepared to be a student for life. Be prepared to be humbled by rhinoplasty.

At the beginning of the journey, the novice must realise his or her own limitations and learn to say “no” at regular intervals. Declining surgery for complex cases should not be seen as a sign of weakness, but the realisation that the patient’s best interest lies in seeing someone with a few more grey hairs. Step by step, the long learning curve mandates on-going attendance in conferences, revision of anatomical knowledge and importantly, seeking the assistance of senior surgeons through various mentorship programmes.

At present, the list of conferences offering advice on rhinoplasty has become so long that even listing them would create confusion and bewilderment. How should we decide on which conference to attend? The fundamental criteria for your choice should include the quality of the scientific programme, the calibre of the speakers, and the openness of the conference

atmosphere. Any surgeon who has been defeated by rhinoplasty should provide examples of lessons learnt, and how difficulties were overcome. A conference that only offers superb photos of excellent results cannot be facing reality. Moreover, the function of a conference must go beyond mere academic education. These gatherings should create the supportive atmosphere necessary for junior surgeons to approach their seniors for teaching opportunities, and forge ties of friendship that are invaluable during times of trouble. Such a complex learning process requires continuous self-examination, and must incorporate the increasingly sophisticated and intricate wishes of rhinoplasty patients whose desires do not always coincide with what surgeons have been taught and still practice.

Unlike other disciplines in medicine, specialized training, a thorough review of the literature, and rigorous scientific methodology do not necessarily ensure successful, long-term aesthetic and functional results. In fact, successful rhinoplasty relies heavily on the surgical expertise of the surgeon whose craftsmanship takes many years to mature and develop. This technical capability can be unique to the surgeon and not readily replicable by another practitioner. Unlike endoscopic endonasal sinus/skull base surgery where the development of technology has had a major impact on the evolution of the techniques or in the implementation of original procedures, rhinoplasty has not witnessed substantial technological advances able to produce seismic shifts in practice. Moreover, rhinoplasty is such a highly individual-based operation that tests for reliability, acceptance, endurance, and safety can be hardly implemented on a large scale. Lack of evidence-based outcomes still remains an unsolved problem in rhinoplasty education. Matters are made more complicated by the patient's psychological state and needs, and the surgeon's ability to perform surgically relevant facial analysis, and his/her sense of beauty and harmony in formulating a patient-specific game plan. Technically, creating subtle change in such a challenging area is beyond the abilities of many surgeons as they venture into this field. Students of rhinoplasty must be aware that they will face a steep learning curve. The mirage of the end of the voyage of discovery may appear daunting to the novice rhinoplasty surgeon, but with reliance on a systemic approach throughout every phase of patient care (pre-, intra- and post-operative phases), the diligent rhinoplasty student may consistently achieve a favorable result and enjoy the satisfaction of a gratified patient.

Personal concepts. *Facial Plastic Surg* 2016;32:587-98.

Suggested readings

1. Constantian MB, Martin JP. Why can't more good surgeons learn rhinoplasty? Aesthet Surg J. 2015 May;35(4):486-9. doi: 10.1093/asj/sju087.Epub 2015 Mar 24

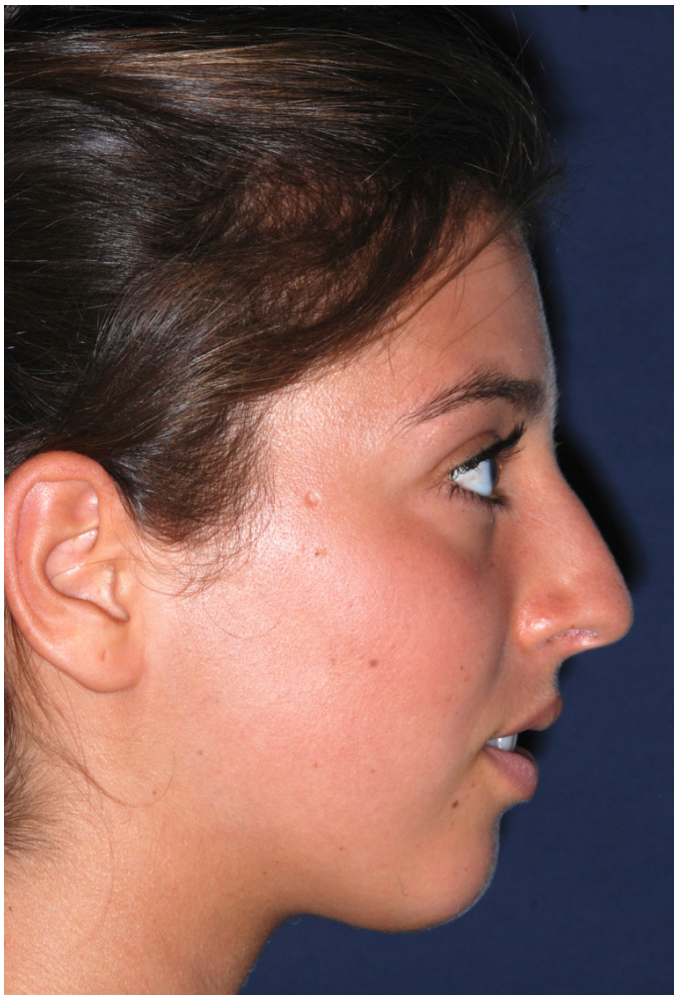
2. Klassen AF, Cano SJ, East CA, et al: Development and psychometric evaluation of the FACE-Q scale for patients undergoing rhinoplasty. JAMA Facial Plast Surg 2016;18(01):27-35

3. Lee MK, Most SP. Evidence-based medicine: rhinoplasty. *Facial Plast Surg Clin North Am* 2015;23(3):303-12.

4. Rhee JS, McMullin BT. Outcome measures in facial plastic surgery: patient-reported and clinical efficacy measures. Arch Facial Plast Surg 2008;10(03):194-207

5. Palma P, Khodaei I. The Dichotomy of Rhinoplasty Practice: from the Conference Floor to the Operating Room. *Facial Plast Surg* 2014;30:103-12.

6. Palma P, Khodaei I, Vasilenko I. Aesthetic rhinoplasty as a surface-contour operation. From analysis to surgery.



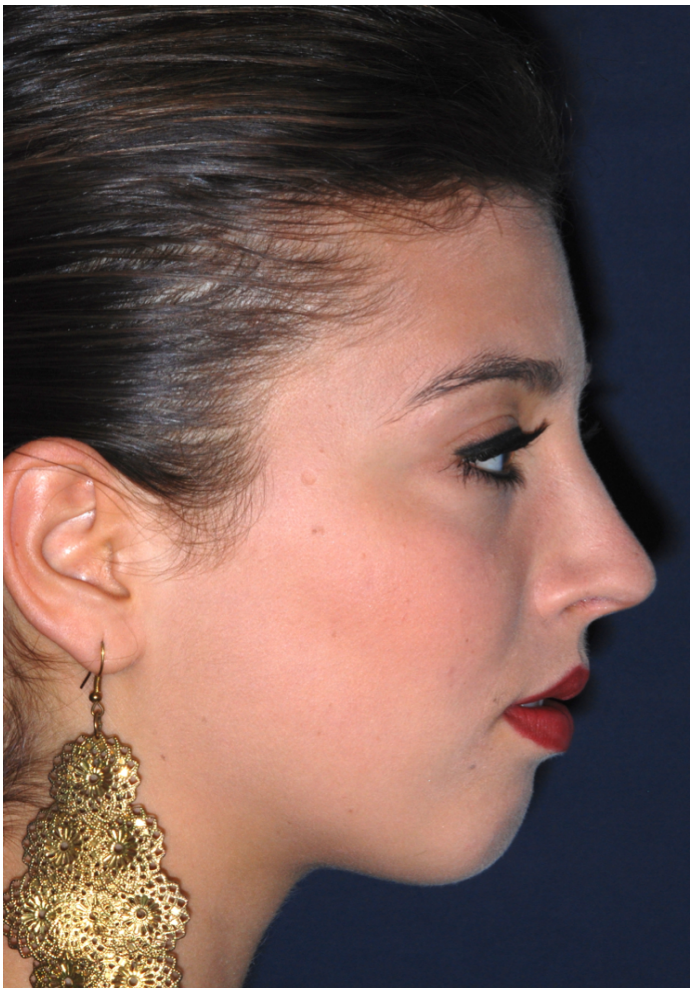


Fig 1 preoperative and post operative

Fig 2 – Fig. 2 A Preoperative and post opertive

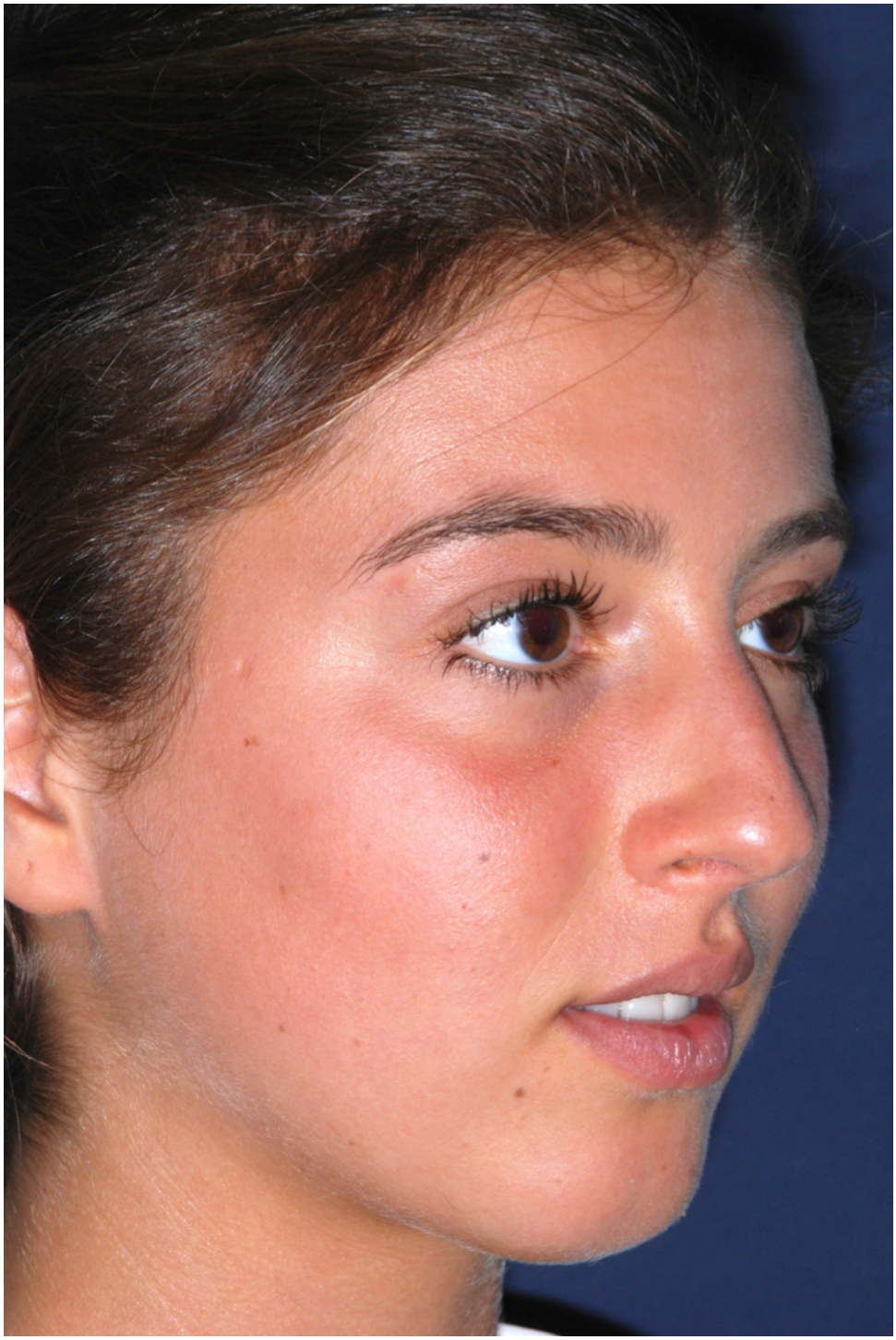


Fig 3

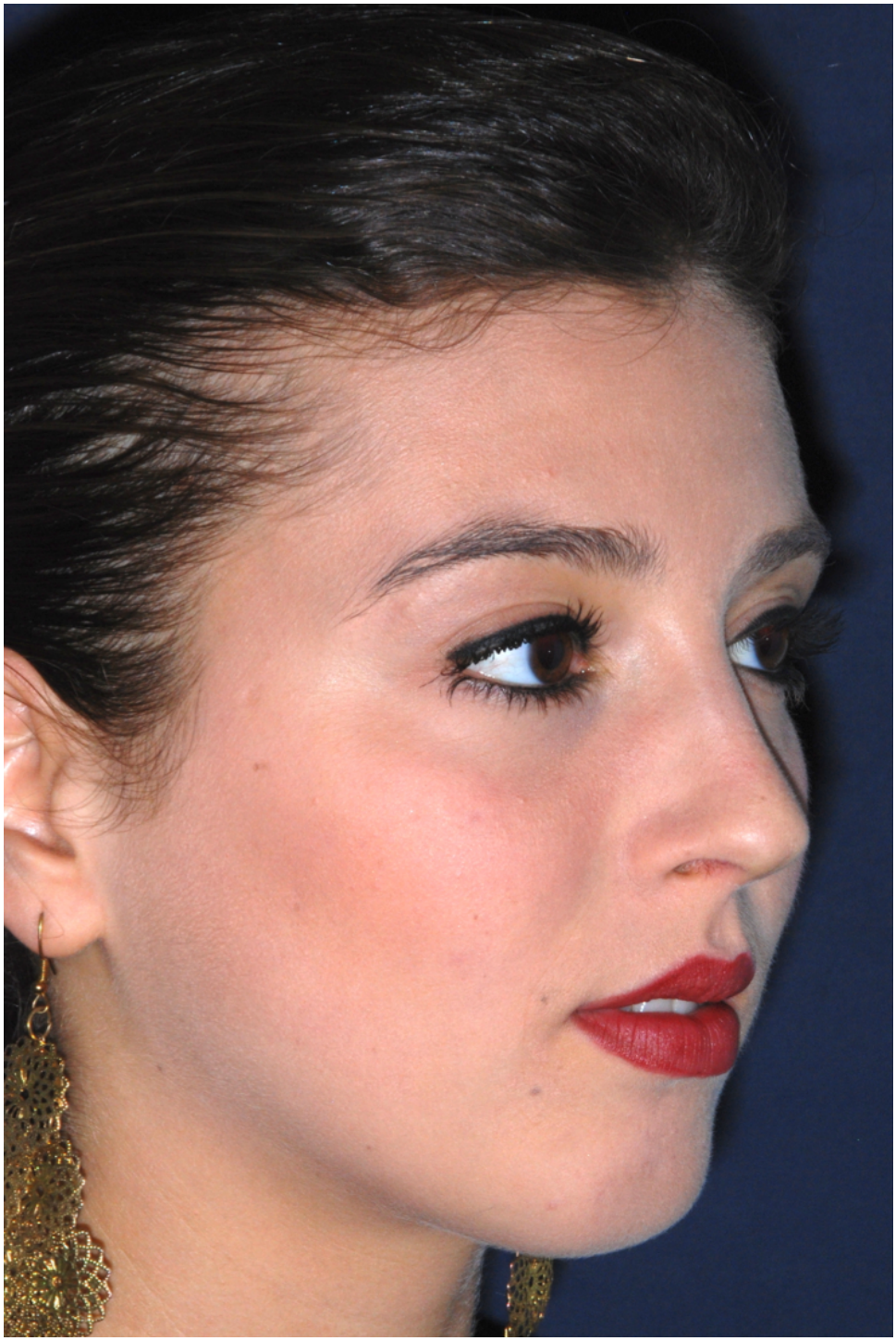


Fig 3 a

Fig 4 – Fig 4 a pre operative and post opertive

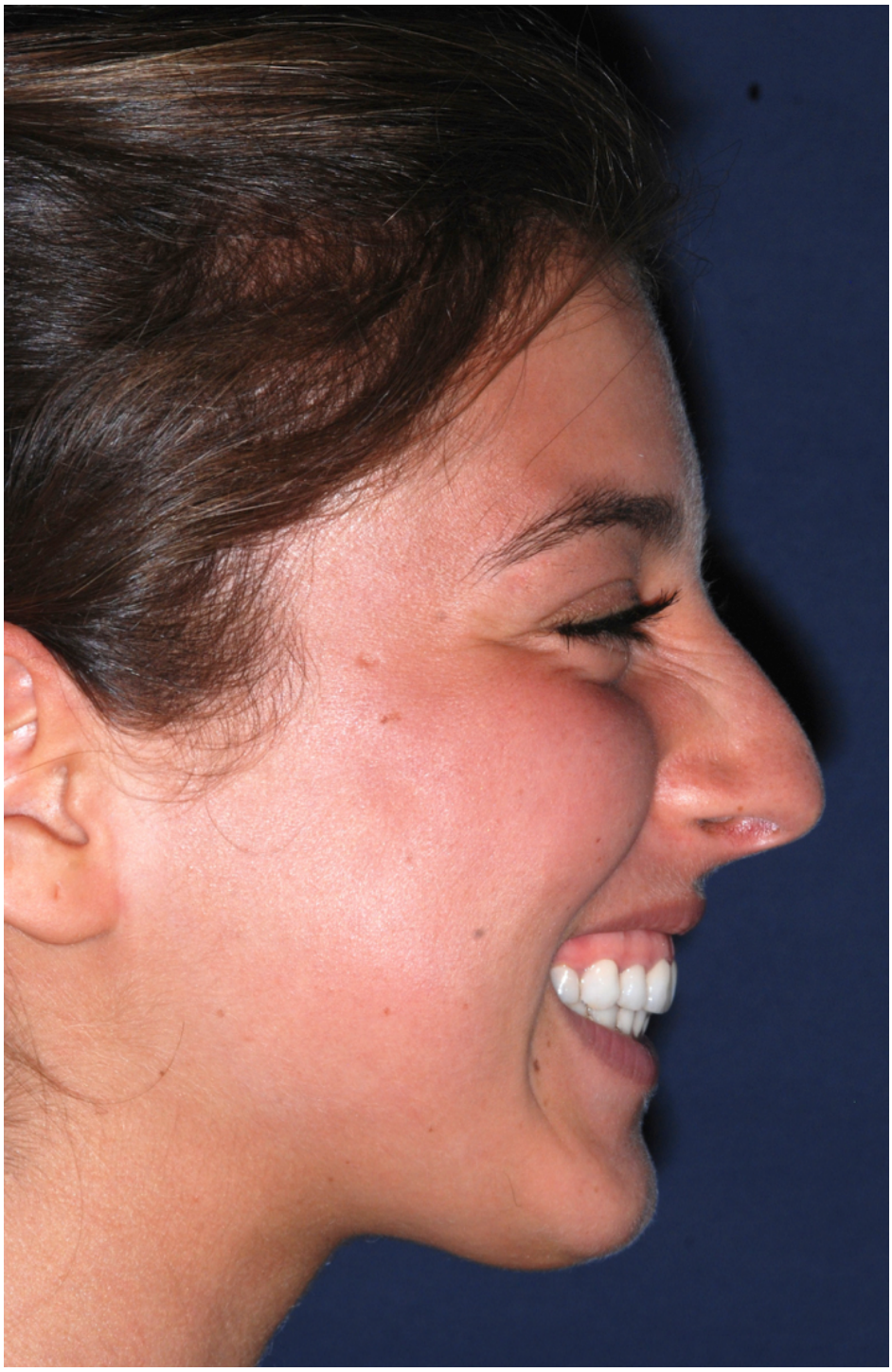


Fig. 5 preopertive

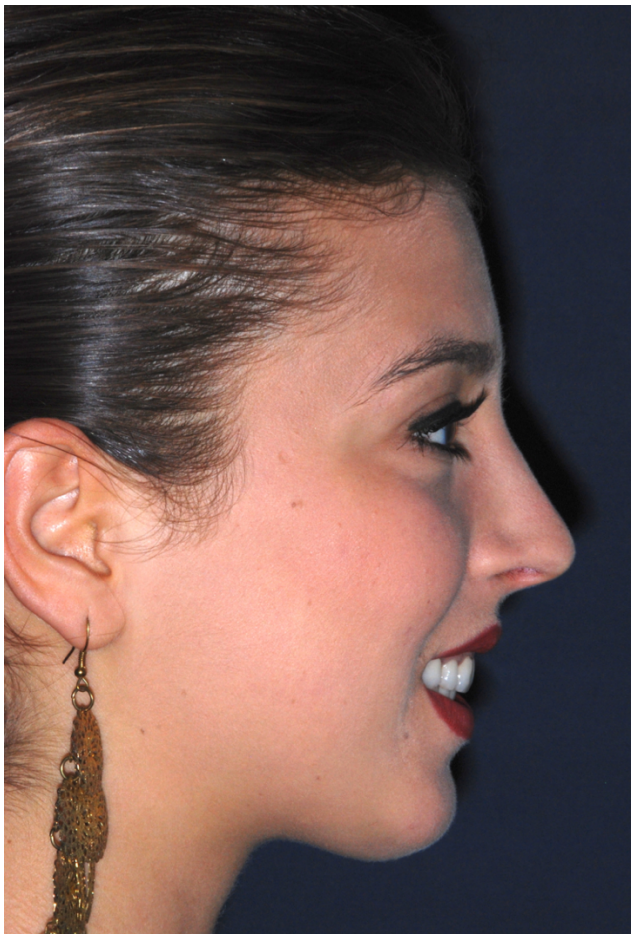


Fig. 5 a

Legends

Pre-operative (Fig. 1, 2, 3, 4 and 5) and post-operative (Fig. 1a, 2a, 3a and 4a) views after endonasal septo-rhinoplasty in a patient with “tension-nose” deformity.

On the side views, the critical contour landmarks of the profile (nasion, rhinion, supratip break point, pronasale, infratip brealpoint and subnasale) have been repositioned in order to get a better aesthetical balance.

On the three-quarters view, the brow-tip lines flow more smoothly and elegantly.

On the base view, the preservation of an intact columella helps in both keeping a natural aspect of the result and avoiding asymmetries of the nostrils contour, potential side-effects of open approach rhinoplasty.

The side dynamic view shows the correction of the tip over-activity. The depressor septi muscle has been detached from its main attachments (columellar intercrural bundle and anterior septal angle).