Facial Rejuvenation Surgery





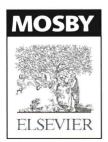


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Foreword

Facial surgery is a fascinating field, and Barry Jones has well explored its different aspects. When he arrived in Paris to work with me as my Fellow many years ago, the first morning he observed me doing a craniofacial case, and then, with equal interest, a face lift that afternoon.

The face is such a complex structure that it is extremely helpful to be able to approach its different components without restriction, from the deep skeletal foundation to the delicate cutaneous coverage.

Craniofacial surgery was developed by Paul Tessier to enable radical correction of a distorted facial skeleton, due to congenital anomalies or resulting from trauma. To mobilize the frontal bones, the orbits, or the maxilla, one has to elevate the soft tissues from the skeleton using incisions that will not damage the muscles or nerves, leaving minimal scars. This was achieved, respectively, through the coronal, lower eyelid (infraciliary or transconjunctival), and vestibular approaches.

These approaches allowed good exposure for all kinds of various osteotomies and skeletal displacements, without leaving any stigmata on the soft tissue coverage. They also showed the possibility of mobilisation of the soft facial tissues in relationship to the skull below. In 1979, Paul Tessier presented the application of this principle to fight against gravity and the sagging of the face with age: the "mask lift" or subperiostal lift. When the soft tissues are freed from the skeletal attachment at the orbital and mid-face level, they can be fixed in a higher position.

Tessier also showed that the contour of the face can be modified by adding cranial bone grafts to the malar bones. The current attention given to the structural changes of the face has evolved from this, as well as the trials to rebuild the projection of the midface, from the suspension and plication techniques used by W. Little to the fat grafting of S. Coleman and various facial implants.

Now, of course, Barry Jones has broad experience in both craniofacial and aesthetic facial surgery himself, and agrees with me that the practice of craniofacial surgery helps for the aesthetic evaluation of the face, especially for the relationship between the skeleton and the soft tissues. He has therefore mastered remarkably well the different aspects of facial aesthetic surgery.

The boundaries between reconstructive and aesthetic surgery are difficult to draw: a patient with moderate facial retrusion is embellished by a Lefort III advancement, an indication which is in fact aesthetic. A sliding genioplasty improves the neck and lower face, as well as the chin. It is also not uncommon that a patient presenting with a basal cell carcinoma requests during the same operative session a blepharoplasty or a face lift, and in that case, both the reconstructive and aesthetic skills of the qualified plastic surgeon are solicited.

Barry Jones shares with me the vision of the aesthetic part of our speciality being addressed with the same rigorously objective scientific and medical approach as the rest of our speciality, and surgery in general.

Daniel Marchac

Preface

Aesthetic surgery is "dedicated to improvements that actually surpass the normal . . . the stakes are high, the margin for error is thin, and complications can be catastrophic" (D. Ralph Millard Jr).

Nowhere is this more valid than in the field of facial rejuvenation surgery.

In the Western world the population is ageing but remaining fitter, both physically and mentally, than ever before. Economic and social changes dictate that a greater number work beyond the age of 60 – figures from the McKinsey Global Institute suggest that while only 18% of Americans between the age of 65 and 70 years continued in work in 1985; the figure is now almost 30%. Physical wellbeing, associated with youth, is prized in our personal and working lives and individuals wish to continue to see this reflected in their faces as they age. Consequently an increasing number are seeking surgical assistance to maintain or improve their facial appearance.

The pressures of modern life often dictate that recovery or "downtime" after an operation is at a premium and despite the increasing acceptance of aesthetic surgery generally, many patients will not want it known to their friends and family that they have undergone an operation. Their wishes are for a procedure which will produce the best possible outcome which is stable and long lasting with minimal or concealed scars, a quick recovery and, above all, the fewest possible complications. Reconciling these considerations with reality may sometimes force a surgeon into adopting a pragmatic stance when designing an operation rather than that of the zealot who will always "go for broke" to produce the ideal outcome whatever the cost in terms of potential morbidity.

This book is not designed to be an encyclopaedic text but rather a distillation of my preferred

techniques for facial rejuvenation which fit these criteria as far as is possible. It is effectively a "how I do it now", describing procedures which have evolved over a very careful analysis of twenty years clinical practice. I may choose more esoteric operations such as the sub-periosteal (mask) lift or composite techniques in selected patients, but these have a greater potential for delayed recovery and require considerable experience on the part of the operator.

This text, photographs and DVD are aimed at residents and relatively inexperienced consultant (attending) surgeons and should guide the reader through all the essential operative steps to perform safe, reliable and predictable facial rejuvenative operations. Any young surgeon should be encouraged to visit and watch, at first hand, acknowledged experts in the field. There is no doubt that the "master and apprentice" system is the best format to learn surgical technique: "by watching the master and emulating his efforts in the presence of his example the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself" (Polanyim. Personal knowledge: towards a post-critical philosophy, London: Routledge Keegan & Paul, 1973; 49-65).

The operation itself is but a part of a patient's overall care, and I have included advice with regard to practice setup, patient selection, record keeping and the avoidance of medico-legal problems, so important in the modern era. Peter Forrester, my anaesthetist colleague, has provided a guide for safe and stable anaesthetic and sedative techniques particularly suited to this type of surgery. My co-author, Rajiv Grover, has been responsible for an extensive statistical analysis of my work over recent years. He has supervised the editing of the operative DVD, distilled the clinical pearls, bullet points and annotated

references (which serve as a guide to the wider literature) and written the text of the chapter devoted to facial anatomy.

The illustrations and DVD have been designed, as far as possible, to demonstrate a view over my right shoulder such as a visitor to the operating room may see. I have referred to the surgeon as "he" throughout for convenience but this reflects no gender bias! I have also assumed that he or she is right handed, as I am, for clarity.

This book is designed with safety, reliability and predictability as paramount considerations. I hope the reader will find it helpful in beginning their own clinical practice in this demanding but fascinating field and, eventually, as a basis around which to evolve new ideas born of personal experience and rigorous analysis.

Barry M Jones London, May 2007

Dedication

This book is dedicated to the rock upon which any success I may have had has been built – my family, Janine, Huw and Georgina Jones.

Acknowledgements

The best advice one can offer any young surgeon is to get the best training they possibly can. In this I was exceptionally fortunate because of the outstanding individuals I came into contact with along the way. They revealed to me not only their technical expertise, but a philosophy for life and the practice of surgery for which I remain truly grateful. I am pleased to have the opportunity to acknowledge some of them here.

Although it is not a contemporary view, I still believe that a broad experience of surgery in general is an invaluable prerequisite for a Plastic Surgeon. John Pendower guided my early surgical career, and by example taught me much more than he will have realised. Like my other general surgery mentors he was himself trained in the Norman Tanner school which provided a framework for technical accuracy, efficiency and predictability in surgery, transferable to any specialty.

Mount Vernon Hospital, in its heyday, was a hotbed of inspiration and innovation in Plastic Surgery. Roy Sanders, Brian Morgan, Douglas Harrison and Paul Smith led the field in the UK. I owe my Plastic Surgery training to them.

In 1984 I met Daniel Marchac and Paul Tessier in Paris. At the time I had thought that hand and microsurgery would be my specialist field. A day with each of them was all that was necessary to make me quite certain that Craniofacial Surgery, which until then I had never seen, offered an irresistible challenge. It is impossible not to be inspired by Paul, a truly great man. Daniel later generously arranged for me to work as his fellow which was a life changing experience professionally and culturally! With him I saw and understood the close link between craniofacial techniques and facial aesthetic surgery which has occupied me for the last twenty two years. It continues to provide as much stimulation and pleasure as on that first day.

To all these men, and to the many fellows and residents whose company I have enjoyed, I extend my most grateful thanks.

Many people have been instrumental in the production of this book. My co-authors, Rajiv Grover and Peter Forrester whose contributions were of the highest standard and timely! I am indebted to the patients who have kindly given permission to reproduce their clinical photographs or film their surgery. Gelly Morgan from Pretty Clever Pictures produced the DVD which was recorded at King Edward VII, Sister Agnes Hospital in London. Professor Jean Fissette very kindly made available to me the anatomy school at the University of Liege, Belgium. Here I carried out the cadever dissections which were photographed by Huw Jones. My secretaries, Sheila Killick and Dee Allen and practice nurse, Janette Karaphillides, have been invaluable, as always, assisting with typing the manuscript, collating clinical photographs and many other unsung tasks. Sue Hodgson and her colleagues, Marsha Bell and Cheryl Brant, at Elsevier have guided the project through to the end.

These many individuals, and others I have not mentioned by name, have made the whole experience not only bearable but fun.

> Barry M Jones London, May 2007

It has been a privilege to be involved with this unique project. My contribution would not have been possible without the help of my office staff: Rita Farren and Jennie Toumadj as well as the continued support of my family: Nikita, Serena and Sophia.

Rajiv Grover London, June 2007



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CHAPTER 1

Introduction

The twenty-first century prizes youth and vitality. The population is generally fitter and living longer. The generation gap has narrowed following the revolution in culture and the power of youth stimulated by The Beatles, Bob Dylan, Andy Warhol and their contemporaries, so that parents are more likely to share interests such as music and fashion with their children than was once the case. The presently middle-aged children of the 1960s do not view themselves as ageing, finding it difficult sometimes to accept the changes in appearance that inevitably accompany the passage of time. What they see in the mirror does not necessarily reflect their inner well being. Increasingly, women occupy senior positions of power and influence in the workplace where physical suggestions of wisdom, born of maturity, may be less valued than the expression of dynamic physical energy. The burgeoning explosion of visual media constantly bombards us with images (often digitally retouched!) of "perfect" people with the implication that they represent an aspirational goal for everyone. Working in parallel with these changes in society's perception, medical science and technology has reached a level of sophistication that can offer the potential to mitigate the physical signs of ageing with low risk. Survival is no longer the only principal effort (of modern medicine): improvement of the quality of life is also important. As a consequence, aesthetic surgery in general and facial aesthetic surgery in particular has seen an unprecedented expansion in recent years.

In all aspects of surgery, but perhaps particularly aesthetic surgery, safety is of paramount importance. A surgeon undertaking facial aesthetic surgery requires a thorough grounding in plastic surgery principles combined with a detailed knowledge of facial anatomy from bone to skin. A thorough working knowledge of the evolution of current surgical concepts is essential as is intimate acquaintance with contemporary literature and techniques. Excellence in outcome is probably as much operator dependent as technique dependent, i.e., a highly skilled surgeon is likely to produce a pleasing outcome

irrespective of the specific technique that he chooses, but it is necessary to adapt one's own methods to the particular needs and physical demands of an individual patient. As with other fields in plastic surgery such as breast reconstruction, there is no "one-size-fits-all"; the surgeon must be flexible in his thinking, planning and execution.

In an age when marketing, spin and image are becoming an integral part of plastic surgical practice, it should be remembered that there is no substitute for technical competence borne of thorough training and experience. Some may be tempted to pursue this type of surgery in the expectation of financial reward, but a real passion for the subject is the key to success. The potential for supreme professional happiness is doing what you would gladly do for free, for a fee.²

Office Organisation

Facial aesthetic surgery is labour intensive and patients require a great deal of support before, during and after their operation. Consulting rooms (the surgeon's office) will reflect the surgeon's individual style and personality, but should be welcoming and friendly rather than overly clinical, which can be intimidating. Whatever physical dimensions appear to be adequate early in a career will almost inevitably become too small in time; buy or rent the biggest space you cannot afford! As a bare minimum there must be a comfortable waiting area, an administrative office where the patient may have confidential discussions with a secretary, a room for removal of stitches, etc., an area for medical photography, and a consulting space which is not cramped. It may be desirable to keep pre and post-operative patients separated, but practicalities often make this impossible.

The surgeon must have sufficient support staff to enable him to concentrate on the medical and technical aspects of care without the distractions of day-to-day organisation, scheduling, billing, dressing changes, suture removal, etc. This requires at least one secretary and one nurse. Each must be technically competent, efficient and reliable, but in addition they need limitless patience and a personality to put patients at their ease. This requires some investment.

Clinical Records

The importance of complete and accurate record keeping cannot be over stated. Hand-written notes may be adequate if they are legible(!) and descriptive, but type-written notes are superior. Standard proformas (Fig. 1.1.1) can be very helpful in providing clarity and efficiency of time when detailing a patient examination and surgical plan. Good operation notes will be typed contemporaneously and reflect an accurate description of exactly what was done and why it was (laptop computers leave no excuse for failing to do this). Post-operatively, notes should be recorded at every visit both by the nurse and the surgeon. It must be remembered that the patient's records may be reviewed at some time distant from the episode in question by a third party, with no other knowledge of the circumstances of their care. The reader should easily gain an accurate picture of all that occurred. Remember - if it is not written down it did not happen!

Photographic Records

Good photographic records are as important to a plastic surgeon as are radiographs to an orthopaedic surgeon. There must be a facility to take well-lit, standardised and therefore comparable photographs both pre and post-operatively. This

FACIAL EXAMINATION

Name:						
Date:						
Brow Height (cm):		Pre-op	6/52	3/12	6/12	
Pupil to Brow (cm):		Right =		Left =		
Brow Ptosis:		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
Glabellar furrows:		Vertical				
		Horizontal				
Upper Eyelids:		Skin				
opportugies.		Fat				
		Canthal position				
Lower Eyelids:		Skin				
		Fat				
		Nasojugal				
		Snap				
Mid Third Malar Prominence:						
	Nasolabial Furrow:					
Marionette Furrow:						
Jowl:						
Neck:		Skin				
		Platysma				
		Fat				
Overall Skir	Condition:					
Comments:						
Surgical Pla	n:					
Discussion:		● *Bruising				
		Swelling Scars				
		Time to settle				
Complications:		♣ Haematoma – early/late				
		♣ Infection				
		◆ VII th nerve damage				
		Anaesthesia				
		♣ Parasthesia♣ Hair Loss				
		Poor wound healing				
		Skin necrosis				
		*Thromboembolism				

Fig. 1.1.1 Facelift examination proforma.

requires a constant background and lighting together with a high quality SLR type camera. It is immensely helpful to be able to show patients their image instantly, and at post-operative follow-up consultations to be able to demonstrate their pre and post-operative appearance simultaneously (Fig. 1.1.2). The advent of digital photography has rendered this aim easy to achieve and there are many suitable commercial systems available.



Fig. 1.1.2 Plasma screen pre/post pictures.

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CHAPTER 2

The Initial Consultation

The primary purpose of an initial consultation is for the surgeon to gain an insight into the patient's needs and wishes and, when appropriate, to devise a suitable treatment plan. It is helpful to have the patient complete a simple demographic pro forma questionnaire before the consultation begins that will record details such as their of date of birth, name, address, contact numbers, any medical allergies, current medication, smoking habit and the patient's primary healthcare provider (general practitioner). Good communication is essential between patient and surgeon and it should always be borne in mind that the object of this type of surgery is to realise (when possible) the patient's desires and not necessarily what the surgeon may want. Good listening skills are essential. An opening remark such as "What can I do to help?" is likely to bear more fruit than asking "What is the problem?" since most patients seeking facial aesthetic surgery are essentially well.

Allow the patient to indicate the areas that concern them most, e.g., evelids, jowls, neck, etc., since their subjective perception may be quite different from the surgeon's objective view. Background information is essential to develop a complete picture of the patient's past medical history, focussing particularly on any significant serious past or chronic disease process, specific cardiovascular disease such as hypertension, tendency to bruise or bleed, smoking habit, etc. In discussing their surgical and anaesthetic history be aware that some patients will not consider previous cosmetic surgery "an operation" and it may be necessary to ask directly about this. An outline of their domestic situation and of their occupation - asking "Do you work, other than at home?" may elicit a more favourable response from a woman than "Do you work?"! The nature of an individual's occupation is particularly important since advice about recovery times may vary, e.g., someone with a well-known face may be advised to take a little longer in recovery than most. Information about smoking habit is of crucial importance.

The physical examination should take place in a comfortable well lit space with the surgeon's eye line at the same height as the patient's eye line (Fig. 1.2.1). The face should be examined in a logical sequence. An impression is gained about general skin quality, exposure to sun, pre-existing conditions such as acne and any facial scarring initially. The brow height and pupil to brow distance should be measured using callipers (Fig. 1.2.2). The general configuration of the eye and orbit – positive or negative vector – should be recorded together with the existence of any asymmetries

that, very frequently, will not have been noticed by the patient. In the upper eyelid the position of the lid margin in relation to the pupil should be noted together with normal functioning of the levator mechanism. Skin excess is examined with the position of any fatty excess in the medial, preaponeurotic and lateral compartments noted. The position of the lateral canthus relative to the medial must be noted together with the relative relationship of the lower lid to the iris. A "snap test" is performed – the patient is instructed not to blink and the lower lid is pulled downwards and



Fig. 1.2.1 Patient examination: patient/surgeon opposite each other.



Fig. 1.2.2 Pupil–brow/brow height measurement.