

Plastic surgery: The future

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Change is the rule of law of life and those who look only to the past or present are certain to miss the future.

----- *John F Kennedy*

Innovation and technological advances based on principles have traditionally defined this broad speciality called plastic surgery. In 1675 Isaac Newton said “if I have seen further, it is by standing on the shoulders of giants”. We have benefited from the honest and generous information of giants like Hippocrates, Sushruta, Ambrose Pare and Dupuytren in France, John Hunter, Sir Astley Cooper in the first quarter of the 19th century in England and later Sir Percival Pott (by 1745, surgeons in England had formally separated from the barbers and in 1800 George III granted a charter to the newly formed Royal College of Surgeons). Between the I and II World Wars surgeons like Gillies and McIndoe had pioneered many a plastic surgical procedures. Generations of surgeons came to London to learn from them.

The word doctor is from Latin meaning “to teach” so we are all teachers wherever we practice. The word student is from the Latin “studere” meaning to be eager, so we are both teachers and students in our lifetime and one cannot be the former without being the latter.

It is a profound and humbling honour to be called a teacher. It is great responsibility. A good teacher cares about the student and is concerned with whether the student learns or not. In learning we acquire information and in teaching we impart and try to stimulate. Education is learning and teaching. Thus, in plastic surgery we try to emulate these principles.

Classically, plastic surgery dealt with congenital deformities, management of trauma, cancer removal and reconstruction and aesthetic surgery. Presently, plastic surgery has developed rapidly over the last 60 years. However, other specialities have started to perform surgeries formerly done by plastic surgeons like Breast surgeons reconstruct breasts, Maxillofacial surgeons repair cleft lips and palate and ENT surgeons do head and neck reconstructions and

Orthopaedic surgeons treat hand problems. This is as it should be. The end result is the benefit for the patients. The field is vast.

As a sequelae of genetic counselling, better nutrition and better prenatal care the incidence of cleft lip and cleft palate have diminished in the developed countries. And a team approach has enhanced the cosmetic end result of these corrected deformities. With the advent of Foetal surgery scarless cleft lip repair will be routine. The development of Craniofacial subspeciality has opened the possibilities of correcting severe deformities of the skull and face. Skull based surgery has also come to stay.

In burns, the older technique of frequent painful dressing, wound infection and high morbidity and mortality has given way to treatment in specialized intensive care units. Better understanding of the pathophysiology of burns, better management of inhalation injuries, early excision and grafting, early enteral nutrition, tissue engineering creating skin culture in spray form and in fewer days, newer skin substitutes like integra etc. have considerably brought down the morbidity and mortality of burns.

Microvascular surgery has come to stay and is must training for the young plastic surgeon and also in many other specialities. This has enhanced the possibilities of transferring small and large chunks of tissue from one part of the body to the other. Large deformities created in resecting cancers are now aesthetically covered by these free flaps.

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Breast surgery, both reconstructive after mastectomy and cosmetic like mammoplasty has developed with the TRAM and other muscle flaps, tissue expansion. Improved breast implants all have changed the appearance of the end result. A free flap for the reconstruction of breast is the preferred method of many surgeons.

Facial rejuvenation for facial nerve palsy in the young as well as the adult is the mainstay in this treatment. Rhytidectomy has advanced from the skin only to the SMAS and platysma advancement and even deep plane face lifts and further improvement provided by fat sculpting, liposuction, augmentation procedures and chemical peel. Endoscopic surgery for forehead lift is being done and this is a whole new field with immense scope. The plastic surgeon is always battling to make his scars smaller, less visible and small holes might be the answer to this.

Body contouring with liposuction with improved armamentarium is being popularized. Hand surgery like many others are being shared by the plastic and orthopaedic surgeon. The message is that they should be tackled by only those trained to do so and where the hand physiotherapist is also available. Regarding hand and face transplant the surgery is still controversial and ethical and moral problems are being raised by the experts themselves. The questions and answers are many and do not seem to settle down as in other organ transplants.

Despite so many rapid advancement a few facts apply equally today as they have done in the past. Basic principles last forever. Simplicity is essential as is good planning and execution. Good taste and judgement are a must in plastic surgery as in life.

We need to be inventive and be able to improvise every time we pick up the scalpel as many times the problems keep on changing as we do the surgery and that is where the challenge and excitement of plastic surgery is. This needs the combination of dexterity and delicacy in handling tissues as in any form of surgery. We must attract the inventive and artistically inclined surgeons to this profession. The need in our country is still basic plastic surgery with burns forming a large part of the practice along with cancer reconstruction and trauma. But with improved communication and with the advent of newer exciting challenges there should be scope for the young surgeon to join this field of plastic surgery. The possibilities for research in subjects like wound healing is there even here. As the clinical material is vast there is immense chance to get results. Maxillary distraction osteogenesis with the combined effort of the faciomaxillary surgeon and orthodontists in treating wide cleft palates is another area of research. Lack of advertisement of this speciality has been the bane of so few taking up this branch of surgery; but as more surgeons are graduating and the scope of this field gets to be known it is hoped that the young surgeon will join this exciting field in the future.