Plastic Surgery in Nigeria-Scope and Challenges

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Abstract

Background

Plastic surgery as a major subspecialty of surgery has existed in Nigeria for several decades but the populace including medical practitioners are yet to fully appreciate its scope. This leads to very late presentation/referral of cases and management of cases that should have been referred by less qualified practitioners with attendant poor outcomes and complications. Most people still regard plastic surgery as being synonymous with cosmetic/aesthetic surgery but the scope goes far beyond this entity. It is therefore important that the public including medical practitioners who are the main sources of referral to the subspecialty are aware of the range of cases handled by plastic surgery units.
The plastic surgeon in Nigeria is also faced with a lot of challenges ranging from the arduous task of one having to manage very many different and complicated cases to being very poorly equipped and appreciated.

Objectives

To educate the populace especially the medical practitioners on the scope of plastic surgery and the extent of development of the subspecialty in Nigeria and solicit for colleague's cooperation in order to move plastic surgery forward. To also highlight the difficulties faced by the plastic surgeon in Nigeria and seeking help from appropriate quarters which will help to reduce unnecessary referrals abroad while improving the services rendered to patients locally.

Conclusion

Plastic surgery in Nigeria has developed significantly both in scope and manpower but it is still faced with a lot of challenges. Knowledge of its scope will help to reduce unnecessary referrals abroad while improving services/skill here in Nigeria.

Key Words: Plastic, Aesthetic, Reconstructive, Burns, scope, challenges.

Introduction

The term "Plastic" in plastic surgery comes from the Greek word "Plastikos" meaning fit for moulding and is the subspecialty of surgery that deals with shaping and reshaping, moulding and beautifying different parts of the body[1]. It has also been defined as repair or reconstruction of lost, injured or deformed parts of the body chiefly by transfer of tissue[2-4]. It therefore deals with reshaping and beautifying (aesthetic) as well as repair/ reconstruction (reconstructive) aspects of surgery. As a specialty, it dates back to antiquity but has made tremendous progress over the years especially following massive complex injuries and burns that followed the world wars and major burn disasters. In Nigeria, plastic surgery has developed tremendously over the years. From a few surgeons in the early 1970s like Prof Oluwasanmi and Dr. Aranmolate and later Prof. Oluwatosin in the west and Drs J.C Nwozo, Iregbulem and Onyia in the East, we now have 72 plastic surgeons with 14 of them in the Lagos area alone as at May 2011. The 'Enugu Plastic Surgery Dynasty' has continued to increase in number over the years and has continued the largest number of plastic surgeons in the West African sub-region. Every geo-political zone of Nigeria now has the services of a plastic surgeon in most of the tertiary health facilities and a good number are in training currently. A good number of Nigerian plastic surgeons are also practicing outside the country.

The major preoccupation of the plastic surgeon is to restore form and function to body parts where these have been lost from congenital or acquired defects, while at the same time concealing blemishes and scars. Plastic surgery therefore is not confined to one anatomic region of the body but involves aesthetic and reconstructive problems throughout the body[3]. The plastic surgeon works hand in hand with other surgical specialists to cover defects created by these various specialities[4]. In the developing world like Nigeria, the majority of the populace including doctors and even some surgeons still lack adequate knowledge of the scope of plastic surgery and its sub specialities[5], and the services available in the country in the areas of plastic surgery. It is therefore important that doctors are educated as they will in turn educate the people around them. This is the only way to take

the practice of plastic surgery in Nigeria to the next level. The unit is appropriately designated as Burns/Plastic/Reconstructive/Aesthetic surgery unit to illustrate the scope.

The Plastic Surgeon in Nigeria is faced with a lot of challenges. Perhaps, foremost is the herculean task of educating his colleagues and the citizenry on the scope and diversity of his area of practice. This will make for early presentation or referral of cases. Following this closely is the explosion in information technology meaning that he has to constantly update himself with the latest technology of the advanced countries which is not available to him. The paucity of specialists in this field has made sub specialization near impracticable at the present moment. As in other fields, sub specialization is what drives skill development and growth. Virtually all the fields covered have become specialized units on their own enabling the surgeon climb the learning curve faster.

In advanced countries, cosmetic plastic surgery stands on its own and specialists in this area are further sub specializing. Burns has become a specialized area on its own for a very long time and specialists in this area also sub specializing. Well-equipped specialized Burn Centers are many enabling effective and efficient utilization of resources, manpower development and optimal patient care. This is not the case in Nigeria. The same plastic surgeon who manages burn patients is the one managing chronic ulcers, hand injury, congenital hand deformities, facial clefts and other deformities and injuries of the head and neck, breast surgery (both aesthetic and reconstructive), keloids and abnormal scars, contractures etc. Yet, the facilities at his disposal are not many and incentives are poor. Burn Centers in Nigeria are too few for the population and the ones available are poorly equipped and understaffed. Poverty and ignorance are still problems as many of the people can hardly afford to pay for the highly skilled services. Some still believe that plastic surgery is only for beautifying the body and this need to be changed.

Materials and Methods

Cases that are usually handled by the plastic surgery units in various parts of Nigeria are highlighted along with the challenges faced by the plastic surgeons. However, some of the cases are also handled by other surgeons and the plastic surgeon sometimes operates as part of a team.

Information was sourced from the secretariat of the Nigerian Association of Plastic, Reconstructive and Aesthetic Surgeons (NAPRAS), Nigerian Burn Society(NBS), Nigerian Journal of Plastic Surgery(NJPS) now in its 7th year of publication, pioneer plastic surgeons in Nigeria, plastic surgeons/ senior residents in all the geo-political zones of the country, transactions from scientific meetings of NAPRAS and NBS, other journal publications/books and internet search.

Results

A. Distribution of Plastic Surgeons in Nigeria

The following represents the situation as at May 2011, of course, it may not be exhaustive;Lagos area-14 with 3 of them in National Orthopaedic Hospital Igbobi, UCH Ibadan-5, National Orthopaedic Hospital Enugu- 7, Enugu outside NOHE-4. 3 each in Abia and Benue, 2 in NAUTH Nnewi, UNTH Enugu, IMSUTH Orlu, Oshogbo, Irua, Iddo, Zaria, Maiduguri, Benin and Gombe; 1 in Owo, Calabar, Ekiti, Ilorin , UPTH, Uyo, Sokoto, Jos, Gwagwalada Abuja, Dala-Kano, Lokoja, Abakaliki, Akure, Asaba, Nguru and other places. A significant number of senior registrars are also in training in plastic surgery with 7 in NOH Igbobi Lagos, 3 NOH Enugu, 3 in UCH Ibadan, 3 UPTH, 2 Ile Ife, Calabar, Jos and Benue, 1 in NAUTH Nnewi, UDUTH Sokoto, LAUTH Oshogbo and others.

B. Cases Done in these Centres

Congenital defects like cleft lip and palate and other cranio-facial clefts. A charity, Smile train inc now pays for cleft surgeries in many centres in Nigeria. Others include congenital ear, nose and mandibular defects. Soft tissue injuries (including human and animal bites), facial including mandibular fractures, dislocation of the temporo-mandibular joint and ankylosis. Also in the scope are eyelid and orbital reconstructions. Tumour excision and reconstruction where large defects are created also require the services of a plastic surgeon[6]. On the limbs (hand and feet**);**Polydactyly(multiple digits), syndactyly (fusion of digits which may be simple or compound/complex), gigantism, clinodactyly, camptodactyly and combinations of these. On the genito-urinary system;Hypospadias, epispadias, bladder exostrophy, ambiguous genitalia and gender re assignment.

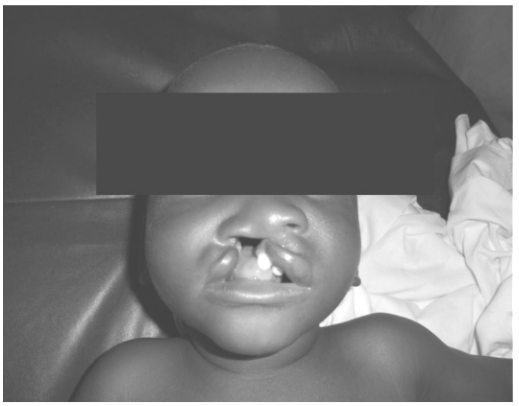
On the breast several problems are seen; in males gynaecomastia, in females from poor to excessive development, asymmetry, ptosis and loss from mastectomy. These are managed by breast reduction, augumentation and reconstruction. It is to be noted that breast reconstruction services after mastectomy for breast cancer is now available in Nigeria and at markedly reduced cost. This is expected to help improve breast cancer care. It is known that the fear of loss of the breast (and of womanhood) is the major cause of late presentation of breast cancer patients to

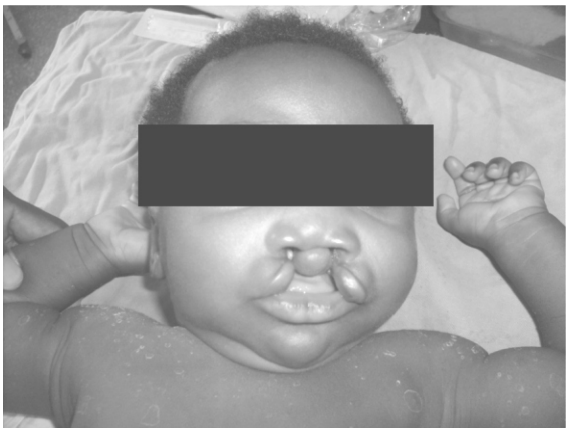
the hospital[7]. Acute hand injuries, post-traumatic, post-infection, post-leprosy, and post-burns deformities. Several reconstructive options are available in Nigeria as several flap reconstructions are performed daily to correct these deformities. The list is endless [4-14].

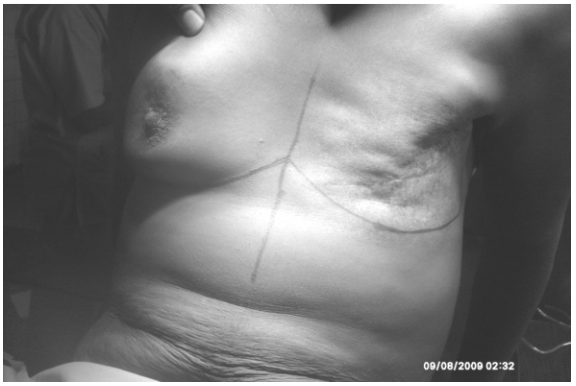
In cosmetic surgery; scar revision, removal of tribal marks and tattoos and skin blemishes and abdominoplasties(tummy tuck),.are routinely carried out in plastic surgery centres in Nigeria today. Microsurgery is also developing gradually. NOH Enugu and UCH Ibadan have done free tissue transfers successfully. A micro surgery course is organized for all residents in plastic surgery as a pre-requisite for the part II fellowship examination.

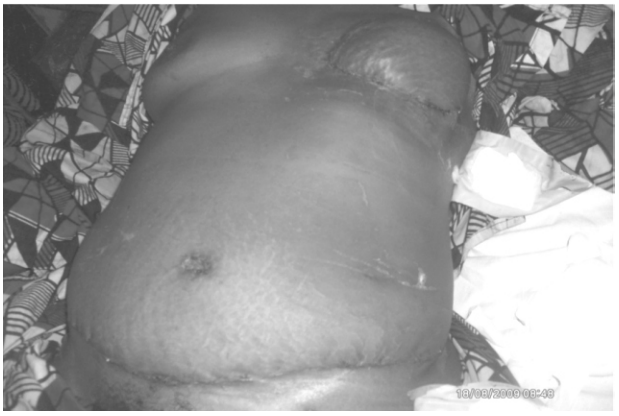
BURNS; This is a subspecialty on its own and is a very devastating injury with coagulative necrosis of the skin and deeper tissues as the hallmark. Several aetiological agents are involved. In severe burns the initial management is very critical to the overall outcome. All major burns and burns of special areas-perineum, face, hand, feet, joints, flexural surfaces etc and chemical and electrical injuries should be referred to the Burns/Plastic Surgeon early. The belief that burns can be managed by just anybody leads to poor outcomes including late complications of burns like contractures, dyschromias and non healing ulcers.

Other routine cases include management of keloids and hypertrophic scars, skin cancers(basal, squamous cell), melanoma, soft tissue injuries, adamantinoma, neurofibromatosis. Abdominal and chest wall reconstruction after tumour excisions, infection and trauma. Chronic osteomyelitis and open tibial fractures requiring flap covers. The problem of contractures are enormous and carry a lot of physical and psychological burden especially in children[9].





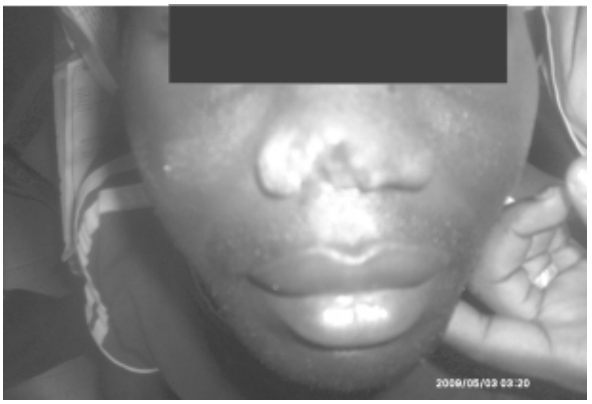


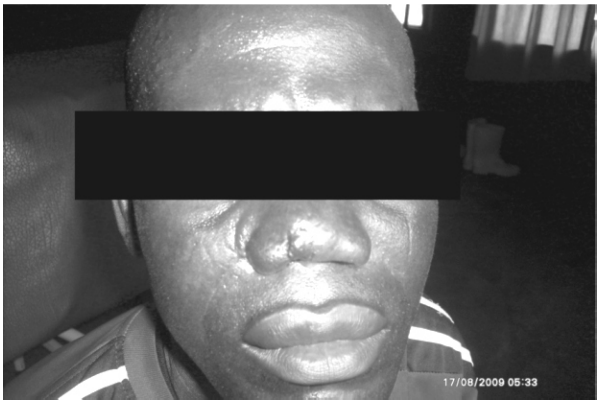


C. Major Constraints

Setting up a new plastic surgery unit in Nigeria is a herculean task[13]. The leaders, both institutional and government are yet to fully appreciate the importance of plastic surgery units. The specialized Burn Units are still too few. Operating microscopes and loupes are not available in most of the centres. The overworked plastic surgeon is paid like any other doctor with no added incentives. This discourages residents from choosing Burns/ Plastic surgery as a specialty.

Cultural beliefs and societal acceptance of cosmetic surgery still hinder development of this aspect of plastic surgery. Late presentation of cases leading to poor outcomes is still rampant in our environment.





Discussion

The main tasks of the plastic surgeon throughout the world remain unchanged-the treatment of congenital deformities, the repair of wounds and the replacement of missing tissues with restoration of anatomical power and aesthesis where these have been lost through trauma, malignancy or disease[15]. The plastic surgeon has been aptly described as the real "General Surgeon" as he works with and/or is often needed by virtually every other subspecialty of surgery[16-18]. A study had demonstrated a general limitation of knowledge of surgical specialists on the scope of plastic surgery[5]. This is a major problem hampering advancement of plastic surgery in Nigeria. The doctors who are the major sources of referral to this sub specialty need to be aware of the scope.

The plastic surgeon works with Orthopaedic surgeons in limb trauma like type IIIB Gustilo-Anderson fractures(as recommended by a joint team of British Orthopaedic and Plastic Surgical Association)[10], chronic osteomyelitis[17], contractures and complex limb anomalies. With the Oto-rhino-laryngologist (ENT Surgeon) in Ear, Nose and other reconstructions[18], with the Ophthalmologist in eyelid and orbital reconstructions[19]. He works with the neurosurgeon in scalp and spinal reconstructions, the General Surgeon in breast and trunk reconstructions.the plastic surgeon works with the Urologists in genito-urinary reconstructions including hypospadias, epispadias, bladder exostrophy, penile and scrotal injuries. He works with the Paediatric surgeon in complex congenital and acquired abnormalities in children and with the Cardiothoracic surgeons in chest wall reconstructions. He assists the Gynaecologist in pelvic reconstructions and the dermatologist in dermoplastic procedures including management of skin cancers (especially in albinos). The oral maxillo facial (OMF) surgeon is a close associate in management of facial and mandibular fractures and Deformities.

It is to be noted that in developed countries, plastic surgery has evolved into several subspecialities-Burns, hand, cleft lip/palate, oncoplastic, oculoplastic and cosmetic/aesthetic. In Nigeria presently we still undertake all the procedures due to limited number of plastic surgery specialists. The country of over 140 million citizens has only seventy-two (72) plastic surgeons resident and actively practicing in the country. Presently plastic surgeons are yet to go round all the states of the federation and some Teaching Hospitals and Federal Medical Centres are yet to get the services of plastic surgeons. Where available, you may have only one or two plastic surgeons serving millions of people. The workload for the plastic surgeon in Nigeria is therefore quite enormous. Resident doctors of Ophthalmology, Orthopaedic, E.N.T and Neurosurgery do plastic surgery rotations to enable them reconstruct some defects and have an idea of areas of cooperation/ the importance of this field to their practices. Plastic Surgeons have thus become expert advisers and helpful collaborators in a wide range of surgery[20]. The plastic surgeon is a team player and indeed the goalkeeper in the field of surgery.

Knowledge and application of this will definitely benefit the patients and their surgeons. This discuss only provides a bird's eye view of the scope of plastic surgery in Nigeria.

Conclusion

The scope of plastic surgery is very wide and the challenges facing the Nigerian Plastic surgeon quite huge from poor infrastructure to limited manpower. The knowledge of the scope and availability of plastic surgery services is still very poor among both the medical community and the general populace. A lot of education is needed to improve on this situation. Government intervention to train more plastic surgeons and properly equip hospitals in

Nigeria is of utmost emergency as referral of cases abroad could be drastically reduced by making use of and improving plastic surgical services in the country.

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References

1. Badoe EA, Archampong EQ, Da Rocha-Afodu JT. Principles and practice of surgery including pathology in the tropics. 4th edition, 2009. Ghana Publishing Corporation, Tema Accra: 271.
2. Sabiston DC. JR. Textbook of Surgery (The biological Basis of Modern Surgical Practice) 15th Ed. W.B. Saunders Company Philadelphia, Pennyslavania 1997: 1298.
3. Russell RCG, Williams NS, Bulstrode CJK. Bailey and Love's short practice of surgery 23rd ed. Arnold Publishers 2000: 163.
4. Akpuaka FC. Stretching Plastic Surgery to the horizon in Africa. Inaugural Lecture Series 3: Abia State University Uturu September, 1999.
5. Adigun IA, Oluwatosin OM. Knowledge of the scope of plastic and reconstructive surgery by surgical specialists at Ibandan and Ilorin, Nigeria. Nigerian Journal of Medicine, 2003; 12(2):91-93.
6. Chukwuanukwu TOG, Anyanwu SNC. Giant fibrosarcoma protuberans of abdominal wall: management problems in resources constrained country. Nig J Clin Pract. 2009; 12(3); 338-340.
7. Anyanwu SNC, Nwose P, Ihekwoaba E, Mberi AT, Chukwuanukwu TO. Neoadjuvant chemotherapy for locally advanced pre-menopausal breast cancer in Nigeria; early experience. Nigerian Journal of Clinical Practice, 2010; 13(2): 215-217.
8. Opara KO, Chukwuanukwu TOG, Ogbonnaya IS, Onah II. The abdominohypogastric flap in soft tissue reconstruction of the hand. Nigerian Journal of Plastic Surgery. 2009; 5(2): 68-72.
9. Chukwuanukwu TOG, Opara KO, Nnabuko REE. Paediatric Post Burn contractures in Enugu, Nigerian Journal of Plastic surgery; 2007; 3(1): 1-4.
10. Opara KO, Chukwuanukwu TOG, Ogbonnaya IS. The groin flap in soft tissue coverage of upper extremity defects in Enugu, Nigeria.. Nigerian Journal of Medicine. 2006; 5(3): 295-297.
11. Onumaegbu OO, Olaitan PB, Ongbabo SE, Onah II, Nwadinigwe CU, Ogbonnaya IS, Achebe JU. Adipo-fascial coverage of lower leg bony defects. Nigerian Journal of Plastic Surgery. 2006; 2(1): 17-22.
12. Ugburo AO, Oyeneyin JO, Mofikoya BO. A six-year retrospective study of the management of nasal deformities at the Lagos University Teaching Hospital from 1991 to 1996. Nigerian Journal of Plastic Surgery.2006; 2(1): 23-29.
13. Tahir C, Bakari AA. Setting up a plastic surgery unit in a Nigerian Teaching Hospital: The Maiduguri experience. . Nigerian Journal of Plastic Surgery.2006; 2(1): 30-33.
14 .Isamade ES, Yiltok SJ, Uba AF, Isamade EI, Daru PH. Intensive care unit admissions in the Jos University Teaching Hospital. . Nig J Clin Pract. 2007; 10(2):156-161.
15. Watson J, McCormack RM. Operative Surgery, Fundamental International techniques, plastic surgery. Butterworths and Co publishers London 1999 3rd ed. Introd.
16 Court-Brown CM, Cross AT, Hahn DM, Marsh DR, Willet K, (Orthopaedic members), Quaba A.A.W.F, Small J, Watson J.S: A report by the British Orthopaedic Association/British Association of Plastic Surgeons Working Party on the management of open Tibial fractures, September 1997:British Journal of Plastic Surgery 1997;50:570-583.
17. Patzakis MJ, Abdollahi K, Sherman R, Holtom PD, Wilkins J. Treatment of chronic osteomyelitis with muscle flaps; soft tissue reconstruction: Orthopaedic clinics of North America, 1993;24(3) :505-509.
18. Ciresi KF, Mathes SJ. The classification of flaps. Soft tissue reconstruction. Orthopaedic clinics of North America. 1993; 24(3):383-391.
19. Patrinely JR, Martnes HM, Anderson RC. skin flaps in Periorbital reconstruction. Ophthalmology. 1987; 31(4):249-260.
20. McGregor AD, Fundamental Techniques of Plastic surgery and their surgical applications 10th ed. Churchill livingstone, London 2000:vii.