• Description of Plastic Surgery
• Reconstruction Ladder
• Reconstruction Triangle
• Analysis of the defect and problem
• Selection of the best method
• Reconstruction Method
• Sample of Cases
• Originally derived from the Greek “plastikos”
  – to mold and reshape

• Plastic Surgery is a specialty
  – adapts surgical principles and thought processes to the unique needs of each individual patient by remolding, reshaping and manipulating bone, cartilage and all soft tissues.

• Plastic Surgery is NOT concerned with a
  – given organ system
  – region of the body
  – age group
• Plastic Surgery
  – the solution of difficult wound healing and surgical problems
• Plastic Surgery
  – restoration or creation
    • the best function
    • form and structure of the body with a superior aesthetic appearance
  – ultimately enhancing
    • a patients quality of life
• the importance of treating the patient as a whole
  – plastic surgeons are concerned with the effect of the outcome on the entire patient

• The challenge of plastic surgery
  – the combination of the surgeon’s judgment and problem solving abilities with surgical technique at any given moment

• Plastic surgeon often acts as a
  • “last resort” surgical consultant
  • “the surgeon’s surgeon.”
• The American Board of Plastic Surgery
  – the specialty of plastic surgery deals with the repair, replacement, and reconstruction of physical defects of form or function involving the skin, musculoskeletal system, craniomaxillofacial structures, hand, extremities, breast and trunk, and external genitalia.
• the scope of the operations performed by plastic surgeons is broad
  – Defects of the body surface
    • from injuries, previous surgical treatment, or congenital deformities
  – Congenital anomalies
  – Craniofacial surgery
  – Hand surgery
  – Microvascular
  – Cosmetic surgery
Plastic, Reconstructive and Aesthetic Surgery

Reconstructive

PLASTIC SURGERY

Aesthetic
PLASTIC SURGERY

- Reconstruction
- After being damaged, to form an mold the thing by getting piece and materials together
PLASTIC SURGERY

Surgical Principles

Thinking/Planning

METHOD

SELECTION

Meet the patient and region specific needs

Monday 23 March 15
PLASTİK CERRAHİ

- TEMEL PRENSİPLER
- DÜŞÜNCE/PLANLAMA SÜRECİ
- UYGULAMA
- Innovasyon
  - Standart ya da tam kabul edilmiş çözümü olmayan sorunların çözümü
  - Mevcut çözümden daha iyi bir sonuç elde edebilmek
SECONDARY HEALING

- wound left open to heal spontaneously
- maintained in inflammatory phase until wound closed

Spontaneous wound closure depends on
- contraction and epithelialization

Contraction results from centripetal force in wound margin probably provided by
- myofibroblasts

Epithelialization proceeds from wound margins towards center at 1 mm/day
• Although contraction (the process of contracting) is normal in wound healing, one must beware of contracture
  – contraction of scar and is a pathological deformity

• Secondary healing beneficial in some wounds
  – Perineum
  – Heavily contaminated wounds
  – Scalp
  – Finger tip
  – Nasal Tip
• **Primary Healing**
  – wound closure by direct approximation,
• **Debridement of non-viable tissue and irrigation of the wound can minimize**
  – inflammation which will facilitate the healing process
• **Dermis**
  – should be accurately approximated with sutures
  – is the strength layer of the wound repair
  – skin glue
    • if the wound is limited to partial thickness depth
• Scar may be
  – red
  – raised,
  – pruritic at peak of collagen synthesis
• Thinning, flattening and blanching of scar occurs
  – over approximately 9-12 months in
• Final result of scar depends
  – largely on how the dermis was approximated
  – can be influenced by tension of the closure, location and presence or absence of complicating environmental factors
• FACTORS INFLUENCING WOUND HEALING

• Local factors MOST IMPORTANT because we can control them
  – Tissue trauma - must be kept at a minimum
  – Hematoma - associated with higher infection rate
  – Blood supply
  – Temperature
  – Infection
  – Technique and suture materials

  • ONLY IMPORTANT when factors 1-5 have been controlled
GENERAL FACTORS

- Can not be readily controlled by surgeon
  - Systemic effects of steroids
  - nutrition
  - chemotherapy
  - chronic illness, etc.,
• **LANGER’S LINES**
  - Natural lines of skin tension
  - Perpendicular to the long axis of mimetic muscles
  - To minimize visible scar, elective incisions are least noticeable when placed parallel
  - Two advantages:
    - the scar is parallel or within a natural skin crease, which camouflages the scar
    - the location places the least amount of tension on the wound.
• **SKIN GRAFTS**

  – harvested from a donor site and transferred to the recipient site **without** carrying its own blood supply

  – It relies on **new blood vessels** from the recipient site bed to be generated
• **ENDİKASYONLAR**
  - Primer kapatılamayan travmatik yaralar
  - Onkolojik rezeksiyon sonrası defektler
  - Yanık rekonstrüksiyonu
  - Skar kontraktürü serbestleştirilmesi
  - Doğumsal deri eksiklikleri
    - Sindaktili

• **BAŞARISIZLIK NEDENLERİ**
  - Avasküler alıcı yatak
  - İnfeksiyon
  - Hematom
  - Seroma
  - Sıyırılma
• **FLAPS**

- Flaps are elevated from a donor site and transferred to the recipient site *with an intact vascular supply*.

- Flaps can be used when the wound bed is *unable to support a skin graft* or when a *more complex reconstruction* is needed.
• Px
  – Age: 67
  – Co-Morbidities
    • None

• Disease
  – Trikolemmal Ca.
  – Defect after resection
    • Whole occipital region
    • Depth
      – CT: No bone invasion but near to bone

• Anatomical Features
  – Touch area

• Postop. RT
  • High Probability
• Decision process to closure
  – Skin Grafting
    • Not appropriate
    • Calvarial bone without periosteum
    • Touch surface when lying down
    • RT
  – Local Flaps
    • Large transposition flap
      – Seems o.k. But not the best
      – Kept in mind as plan B
  – Regional Flap
    • Trapez Skin-Muscle Flap
  – Free Flap
    • Plan C

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SERBEST FLEP

- 1552 Pare Vasküler onarım yapılabilir
- 1759 Hallowell Brachial arter onarımı
- 1897 Murphy İlk vasküler anastomoz tarifi
- 1964 Malt İlk klinik mikrocerrahi uygulama

Kol replantasyonu

- 1965 Tamai İlk Parmak replantasyonu
- 1970 Buncke Serbest omentum ile scalp
- 1973 Daniel ve Taylor kasık flebi
SERBEST FLEP

- Lokal ya da bölgesel fleplerin kullanılamadığı durumlar
  - Enfeksiyon
  - Enflamasyon
  - Radyoterapi
  - Yetersiz doku
  - Yetersiz pedikül uzunluğu
  - Yetersiz rotasyon arkı
  - Kabul edilemez verici alan morbiditesi
• **FREE FLAPS**
  
  – *detached at the vascular pedicle* and transferred from the donor site to the recipient site.
  
  – They require *re-anastomosis of the artery and vein* to recipient vessels at the recipient site.