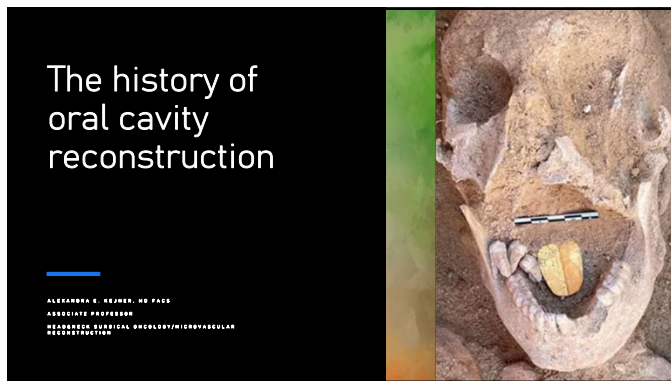
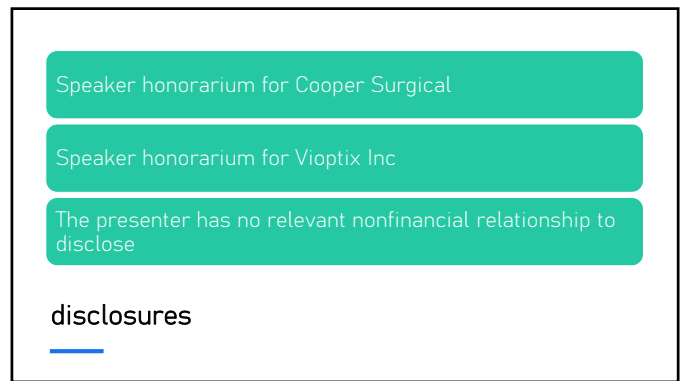




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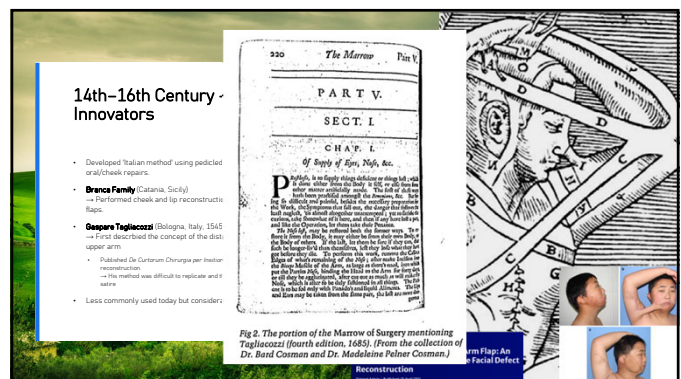
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18th–Early 19th Century – European Revival

- **Joseph Carque** (England, 1764–1846)
 - Adapted Indian flap (forehead) methods; performed the first modern rhinoplasty in England (1814)
 - Early applications extended to oral and perioral defects
- Restored Tagliacozzi's reputation by re-introducing pedicled techniques
- **Karl Ferdinand von Grafe** (Germany, 1787–1840)
 - Developed refinements in local flap reconstruction for lips and cheeks, influencing intraoral techniques
- Von Hacker described Wanderlappentransplantation (Walking flap transfer)

The pedicled lateral forehead flap in reconstructing oral floor defect - The last resort: case report

7

Quick detour into the history of tubed flaps

Fig. 1 Closure of a palatal defect with a tubed forearm flap by Ganzner, published in 1917. [10] Drawing from the original illustration, made by K.W.M.

Fig. 2 The photograph showing the first tubed pedicle flap of Filatov published in 1916 [9]

Table 1 Bibliographic data and references about the first use of the tubed pedicle flap operation, public presentation, publications for Filatov, Filatov, Ganzner and Gillies

First operation	First public presentation	First publication
Filatov 18 October 1917 [10]	Not known	15 Dec. 1917 [7]
Ganzner 9 Sept. 1916 [9]	22 Nov. 1916 [8]	April/May 1917 [6]
Filatov Not known	30 March 1917 [10]	July 1917 [5]
Filatov 13 October 1917 [10]	Not known	1920 [10]

Fig. 3 Closure of a palatal defect with a tubed forearm flap by Ganzner, published in 1917. [10] Drawing from the original illustration, made by K.W.M.

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Late 19th – Early 20th Century – Foundational Oral Techniques

- **Harold Gillies** (New Zealand/UK, 1882–1960)
 - Pioneered tubed flaps, bone grafts, and prosthetics for WWI facial/oral reconstruction
- **Varaztad Kazanjian** (Armenia/USA, 1879–1974)
 - "Father of modern plastic and oral surgery"; advanced mandibular reconstruction and lip repairs, combining bone grafts with prosthetics.

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Harold Gillies:

(6/17/1882 – 9/10/1960)

- Pioneering otolaryngologist who advanced war-time and post-traumatic reconstruction during WWI
- Established the "Gillies Hospital" the Queen's Hospital in Sidcup, KENT to treat severe facial injuries of soldiers in WWI
- Developed a team of dentists, maxillofacial surgeons, anesthetists, and prosthodontists to take care of war time facial injuries
- He is credited with many of the techniques we continue to use today – bony grafting, tubed flaps, skin grafts, delayed flaps

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The dental team: 'I'll take the hard tissues. You take the soft part.' – attributed to Kesley Fry

- Sir Auguste Charles Valadier 1/12/1871-8/31/1931 French/American dentist who set up a 50-bed oral surgery unit to treat facial injuries that he funded himself*
- Pioneered the use of bone grafting, splinting, and wound irrigation
- Sir William Kesley Fry 3/18/1889-10/26/1963
 - Developed airway management techniques for ppl with facial injuries
 - Ultimately developed techniques for cleft palate and other facial deformities
- Henry Pickrell 8/3/1879-8/10/1956
 - Helped pioneer bone/skin/fat grafting, jaw wiring (despite no training in the field)
 - Helped to develop a facial injuries hospital in NZ at conclusion of the war

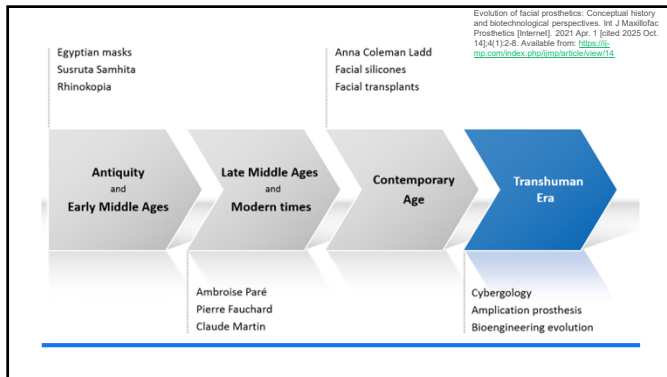
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Varaztad Kazanjian

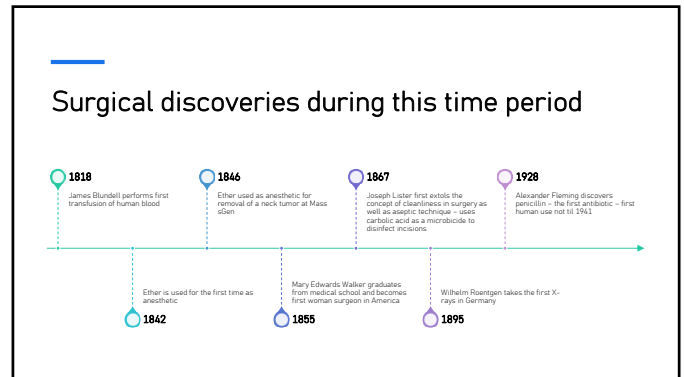
1879/1974

- Armenian descent, established the first maxillofacial surgery unit at Harvard Dental School in 1902
- Was in dental practice during WWI
- Developed interdental wiring techniques and surgery to reconstruct soldiers' jaws
- Designed the Kazanjian button – used to immobilize the mandible

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Review: J Craniofac Surg. 2016 Oct;27(7):1842-1848. doi: 10.1097/SCS.0000000000000957.

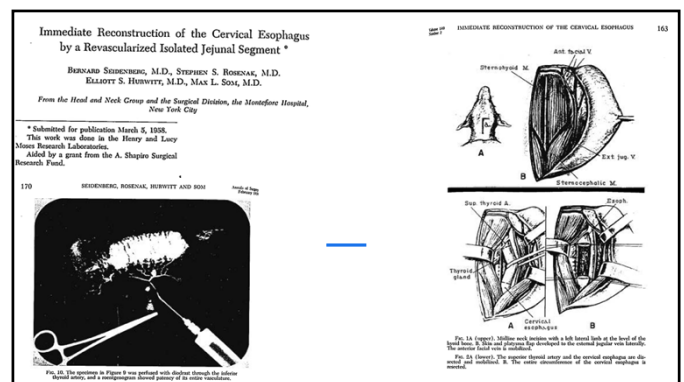
The Origins of Deltopectoral Flaps and the Pectoralis Major Myocutaneous Flap

Kun Huang¹
Mulliken + egroup
PMID: 27783977 DOI: 10.1097/SCS.0000000000000957

1940s-1960s: Pedicled flap era and the beginning of the microsurgery

- 1917: hotly contested who actually came up with it
- 1953: John Conley NY,NY - laterally based DP flap
- 1965: Bakamjian: medially based DP flap for pharyngoesophageal reconstruction (similar to Aymard flap) - Bakamjian did not cite Aymard
- 1968: Hueston, Melbourne, Australia - included pec major as a compound flap
- 1972: Krizek New Haven, CT - cited both Aymard and Bakamjian
- 1979: Ariyan, New Haven, CT and Baek NY, NY - both described PMMC compound flap. Also described the TAP (thoracoacromial perforator flap)
- 1980: PMMC first used for reconstruction of head and neck

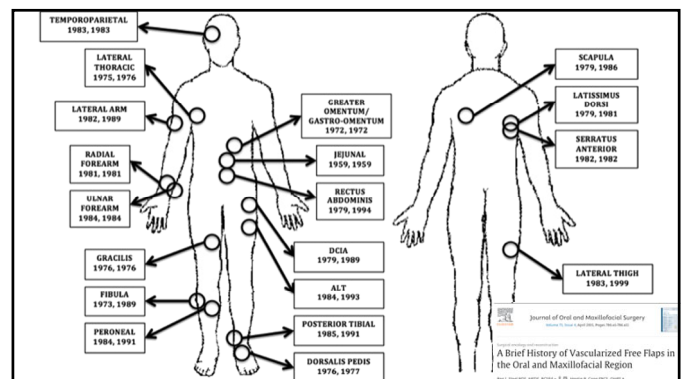
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Free Flap Type	First Published Clinical Use	First Published Use in Head and Neck
Jejunal	Seidenberg et al. 1959	Seidenberg et al. 1959
Greater omentum/gastro-omentum	McLean and Buncke, 1972	McLean and Buncke, 1972
Fibula	Ueba and Fujikawa, 1983	Hidalgo, 1989
Lateral thoracic	Baeck and DeConnek, 1975	Baehner et al. 1979
Gracilis	Hari et al. 1976	Hari et al. 1976
Dorsalis pedis	Robinson, 1976	Loeb et al. 1977
Rectus abdominis	Holmstrom, 1979	Hasegawa et al. 1994
Iliac crest/deep circumflex iliac artery	Taylor et al. 1979	Urken et al. 1989
Latissimus dorsi	Maxwell et al. 1979 Watson et al. 1979 Bostwick et al. 1979	Fujino et al. 1981
Scapular	Gilbert, 1979	Swartz et al. 1984
Radial forearm	Yang et al. 1981	Yang et al. 1981
Serratus anterior	Takayanagi and Tsukie, 1982	Hari et al. 1982
Lateral arm	Song et al. 1982	Marikou et al. 1989
Temporoparietal fascia	Brent and Byrd, 1983	Brent and Byrd, 1983
Lateral thigh	Baek, 1983	Hayden and Leischner, 1999, based on cases treated from 1984
Peroneal	Yoshimura et al. 1984	Nakai et al. 1991
Ulnar forearm	Love et al. 1984	Love et al. 1984, based on cases treated from 1983
Anterolateral thigh	Song et al. 1984	Koshima et al. 1993
Posterior tibial	Hwang et al. 1985	Chen et al. 1991

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Fibula flap

- Japan and Australia simultaneous development in 1973
- 1983- Chen and Yan first to describe osseocutaneous flap
- Wei et al 1986 – defined the septocutaneous perforators of the peroneal artery
- 1989 – first use by Hidalgo in the mandible and then maxilla in 1994
- 1993 – wide use of osseointegrated implants
- 2009 Hirsch

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Free Vascularized Thin Corticoperiosteal Graft

Rezaeei, M.D., W.B., Korman, M.D., W.B., and Hirsch, M.D., 1994

Medial femoral condyle (mfc) corticoperiosteal free flap

• FIRST DESCRIBED IN 1990 FOR OROPHARYNGEAL RECONSTRUCTION BY DR. KAZUHIRO SAKAI

• FIRST DESCRIBED IN ENGLISH LITERATURE FOR ORAL CAVITY IN 2008 BY DR. MICHAEL CHIARI

• FIRST DESCRIBED FOR MAXILLA 2009 BY DR. STEVEN MORAN

The Microvascular Osteocutaneous Femur Transplant for Covering Combined Alveolar Ridge and Floor of the Mouth Defects: Preliminary Report

Alexander Garg, M.D., D.D.S., Ph.D.,¹ Helmut Böhner, M.D.,² and Friedrich-Michael Chant, M.D., D.D.S., Ph.D.

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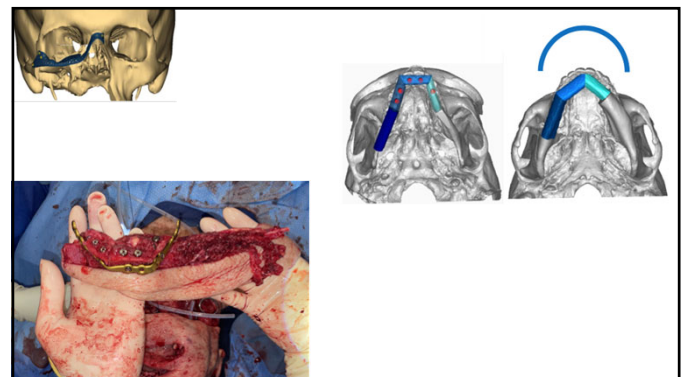
Anterior lateral thigh osteomyocutaneous free flap reconstruction in the head and neck: The anterolateral thigh osteomyocutaneous femur bone flap

Robert M. Brady, MD,¹ Nimish C. Pandey, MD,² Andre M. Bur, MD,³ Bert W. O'Malley Jr., MD,⁴ Christopher H. Russell, MD,¹ Gregory S. Weinstein, MD,¹ Ara A. Chalian, MD,¹ Jason G. Newman, MD,¹ Steven B. Connolly, MD¹

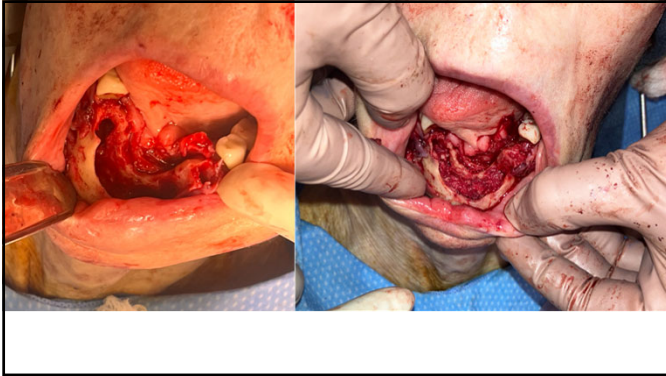
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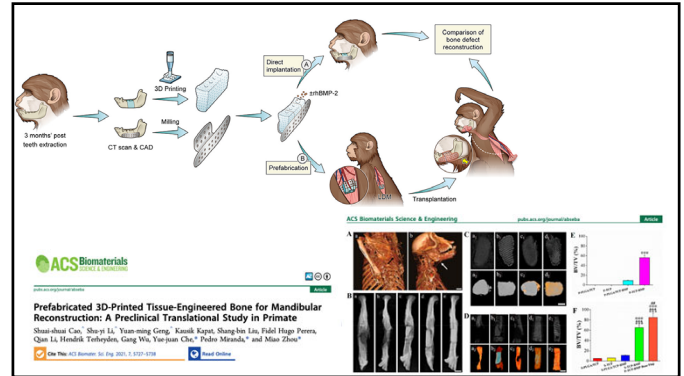
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