Variations of Parotidectomy – Indications and Technique

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Parotidectomy

- Personal experience > 32 years
- 60 – 100 cases per year
- Variety of neoplasms and anatomic variations
- Minimal morbidity overall
- Recurrent neoplasms – challenging cases
Parotid Surgery - Challenges

- Patient expectations
- Variety of tumors encountered
- Relationship and size of the tumor to the nerve
- Extend the operation as needed
- Role of pathology

Parotidectomy

- Surgical options:
  - Superficial parotidectomy
  - Partial parotidectomy
  - Deep lobe parotidectomy
  - Total parotidectomy
  - Extended parotidectomy
Surgical Technique

- Superficial parotidectomy
- Deep lobe parotidectomy
- Surgeons will spend their entire career trying to learn when it is safe or necessary to do more or less than a superficial parotidectomy

Superficial Parotidectomy

- Indications
  - Neoplasm
  - Risk of metastasis
  - Recurrent infection/abscess
  - Surgical exposure – deep lobe/
    parapharynx/
    infratemporal fossa
  - Cosmesis
Pre-operative Discussion

➢ Individualized
  • Goals – rational – risks

➢ Goals – safe and complete removal with surrounding margin of normal tissue and preservation of facial nerve function
Facial Nerve Identification

- Helpful:
  - Cartilaginous pointer
  - Posterior belly of the digastric muscle
  - Mastoid tip
- Retrograde dissection
- Mastoid dissection
Superficial Parotidectomy

- Surgical goals
  - Avoid facial nerve injury
  - Remove tumor with surrounding parotid tissue
  - Minimize capsular dissection
  - Avoid tumor spillage

Partial Parotidectomy

- Inferior parotidectomy
- Posterior parotidectomy
- Accessory parotidectomy
- Deep lobe partial parotidectomy
Deep Lobe of the Parotid Gland

- Largest portion between ramus of mandible and mastoid process
- Small amount deep to facial nerve and over masseter muscle
- Smaller extension retromandibular into the parapharyngeal space

Deep Lobe Parotidectomy Indications

- To understand the indications one must know:
  - Regional anatomy
  - Embryology
  - Lymphatic drainage of the parotid area
  - Parotid tumor behavior
  - Effective surgical technique
Parotid Lymph Nodes

- 15-20 parotid regional nodes
- Paraglandular – intraglandular
- Number lymph nodes

Superficial lobe: 7.6±3.4, Range 3-19
Deep lobe: 2.3±1.8, Range 0-9
Deep Lobe Parotidectomy

Indications

- Both benign and malignant tumors
  - Deep lobe parotidectomy alone – usually benign disease
  - For malignant disease – deep lobe parotidectomy generally done in conjunction with a superficial parotidectomy
- Facial nerve preserved or removed depending on the individual case

Deep Lobe Parotid Surgery

Partial Removal

- Identification of facial nerve portion or all
- Mobilization of facial nerve
- Removal portion gland by tumor
- Preservation most deep structures
Deep Lobe Removal 
Total Parotidectomy

- Concept lymphatic spread
  - Primary parotid neoplasms
  - Metastasis to superficial parotid nodes
- Frequently misunderstood aspect of the treatment of parotid malignancy
Case Report

- Melanoma temple with palpable mass lower pole of parotid
- PET scan / CT negative except for single parotid node

Case Report

- Treatment
  - Excision of the primary
  - Superficial parotidectomy
    - One 2 x 2 cm node pos.
    - 1 / 6 other nodes positive
  - Deep lobe removed
    - 1 / 3 nodes positive
  - Select neck dissection
    - 1 / 8 upper nodes positive
    - 0 / 10 mid
    - 0 / 6 low
Deep Lobe Removal
Positive Superficial Parotid Nodes

- 66 year old male
- Parotid gland adenocarcinoma
- Pathology findings
  - 8 of 9 superficial parotid nodes positive
  - 5 of 6 deep lobe nodes positive
  - 15 of 41 neck nodes positive

Deep Lobe Removal
High Grade Parotid Malignancy

- 64 year old male
- Carcinoma Ex-pleomorphic – superficial lobe
- Sarcomatoid salivary duct carcinoma type
- Pathology findings
  - 3x3x2 cm parotid mass – sup. lobe
  - 4 parotid nodes negative
  - 42 neck nodes negative
  - 2 deep lobe nodes positive
Deep Lobe Parotidectomy

Indications

- Actual or presumed metastasis to deep parotid nodes
  - All cases of metastasis to superficial parotid nodes (Parotid and extra-parotid primaries)
  - Any parotid malignancy with cervical metastasis
  - High grade aggressive parotid malignancies

Deep Lobe Parotid Surgery

Total Removal

- Initial superficial parotidectomy
- Complete facial nerve mobilization
- Removal vessels – key step!
  - External carotid
  - Superficial temporal
  - Internal maxillary
Deep Lobe Parotidectomy

- En-bloc removal
- Preserve facial nerve
- Remove gland and deep parotid nodes
- Safe and effective
Summary

- Surgeon should be able to match patient’s expectations of a safe successful tumor removal with preservation of facial nerve function.

- Challenges — unknowns — unexpected — unusual.