A SWOLLEN JAW: Imaging Detection of a Small Mucoepidermoid Carcinoma

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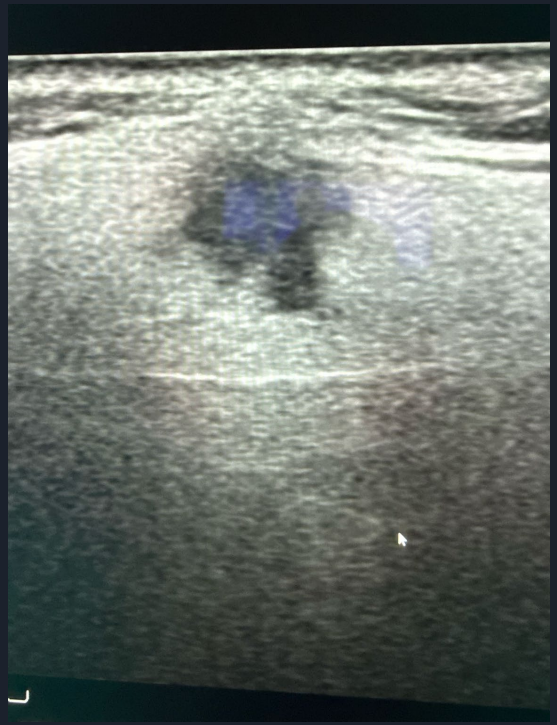
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Clinical Presentation

- **Demographic**: 54-year-old man
- **History**: GERD, chronic back pain
- **Complaint**: subtle, painless swelling along the right jaw
- **Duration**: 8 months
- **Pertinent negatives**: fever, chills, malaise, night sweats, or unintentional weight loss

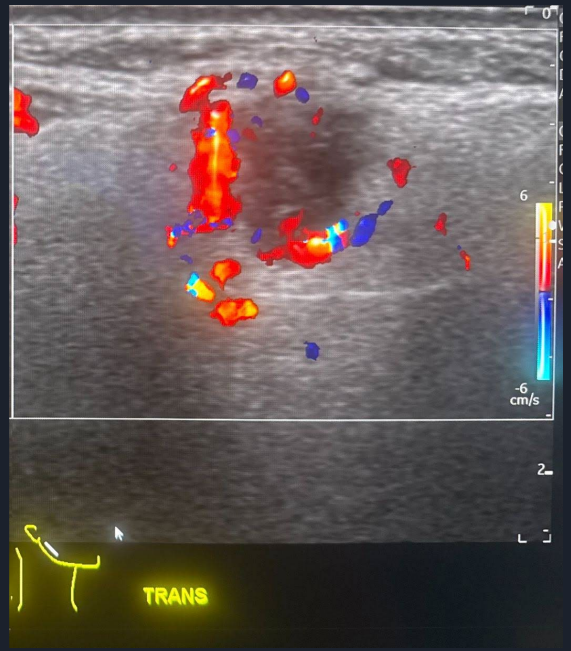
Imaging: **ULTRASOUND**

- **irregular, lobulated hypoechoic intraparotid nodule**
- internal vascularity on color Doppler imaging.
- Indeterminate → cross-sectional imaging and tissue sampling were recommended.



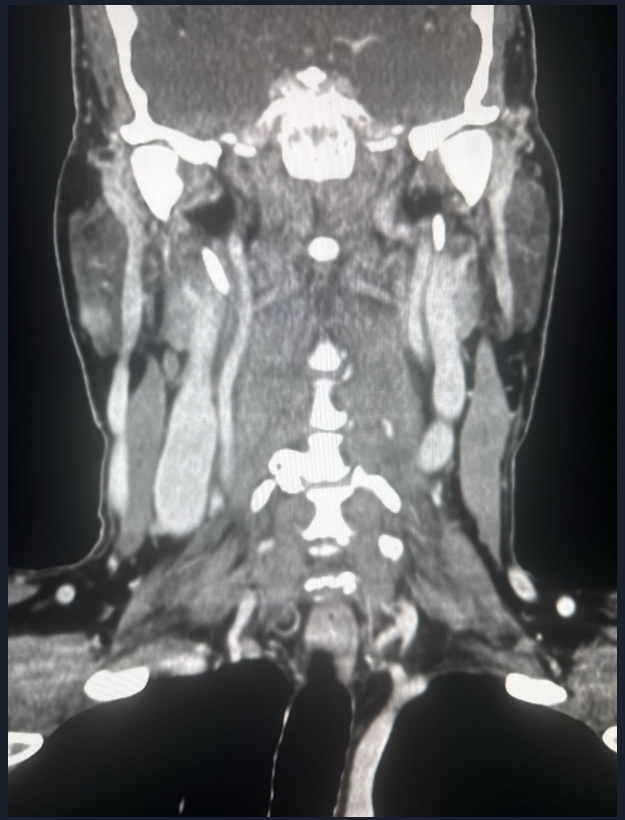
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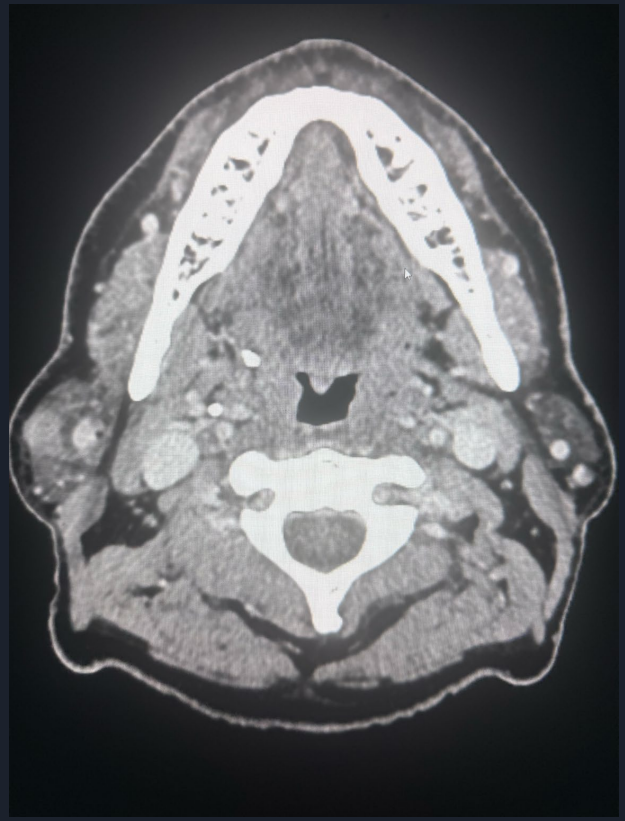
Imaging: **CT**

- poorly defined, enhancing lesion measuring approximately 1.0 × 0.8 cm
- Pertinent negatives:
  - No pathologically enlarged or morphologically suspicious cervical lymph nodes
- Irregular margins and enhancement pattern raised concern for primary parotid neoplasm
- Imaging differential included:
  - benign tumors
    - pleomorphic adenoma
    - Warthin tumor,
  - primary salivary malignancies
    - mucoepidermoid carcinoma
    - acinic cell carcinoma
    - adenoid cystic carcinoma



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Management

- **Definitive Diagnosis via U/S guided Tissue Sampling**: mucoepidermoid carcinoma
- **Treatment**: surgical resection
  - Local, not systemic, lesion
  - No imaging evidence of regional metastasis

Outcome

- **Confirmed Diagnosis**: mucoepidermoid carcinoma
  - intermediate-grade
  - negative surgical margins
  - no evidence of lymph node involvement
- **Treatment**: successful surgical resection.

Take Home Points

- Persistent, painless, unilateral parotid swelling → automatically evaluate for neoplasm
- Benign & malignant parotid tumors often overlap → tissue diagnosis is frequently required.
- Mucoepidermoid carcinoma can present as small and clinically indolent
  - → Tumor size and absence of lymphadenopathy ≠ benign
- Parotid gland contains intra-parotid lymph nodes ← unique embryology:
  - Parotid encapsulation occurs after regional lymphatic system development
  - → Lymph nodes are incorporated within the gland
  - Intra-parotid mass may represent: primary salivary neoplasm or lymph node pathology

Take Home Points

- **Ultrasound**:
  - effective initial modality for characterizing superficial parotid lesions and guiding tissue sampling.
- **CT**:
  - assesses tumor extent, cervical lymphadenopathy, and osseous involvement.
- **MRI**:
  - offers superior soft-tissue characterization and is particularly useful when deep-lobe involvement or perineural tumor spread is suspected.

THANK YOU