

Interventional Radiology in Dentistry

PL Westesson

**University of Rochester Medical Center
Rochester, New York**

INTRODUCTION

Interventional maxillofacial radiology is an offspring of the general radiology interventions. This is one of the fastest growing areas of radiology where imaging techniques are used to perform procedures that previously needed an open approach. The minimally invasive approach have reduced morbidity, mortality and shortened hospital stays. It is now often possible to both diagnose and treat lesions that in the past, required an open surgical procedure.

Diagnostic procedures

TMJ

Salivary glands

Eye

Biopsy

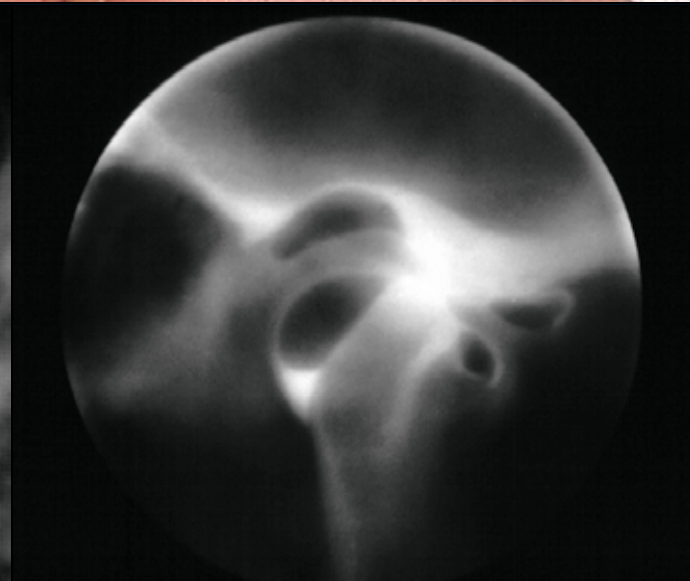
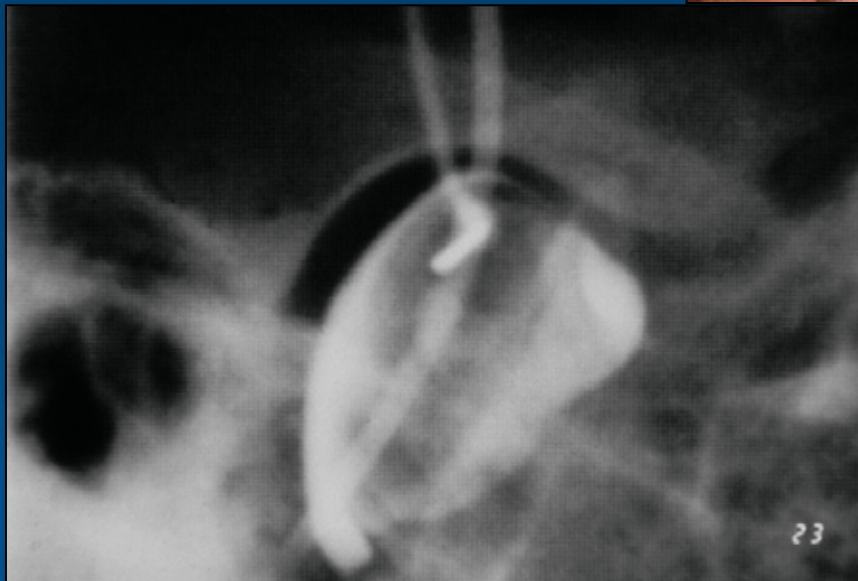
Therapeutic procedures

Balloon dilatation

Botox

Embolization

TMJ arthrogram



TMJ arthroscopy

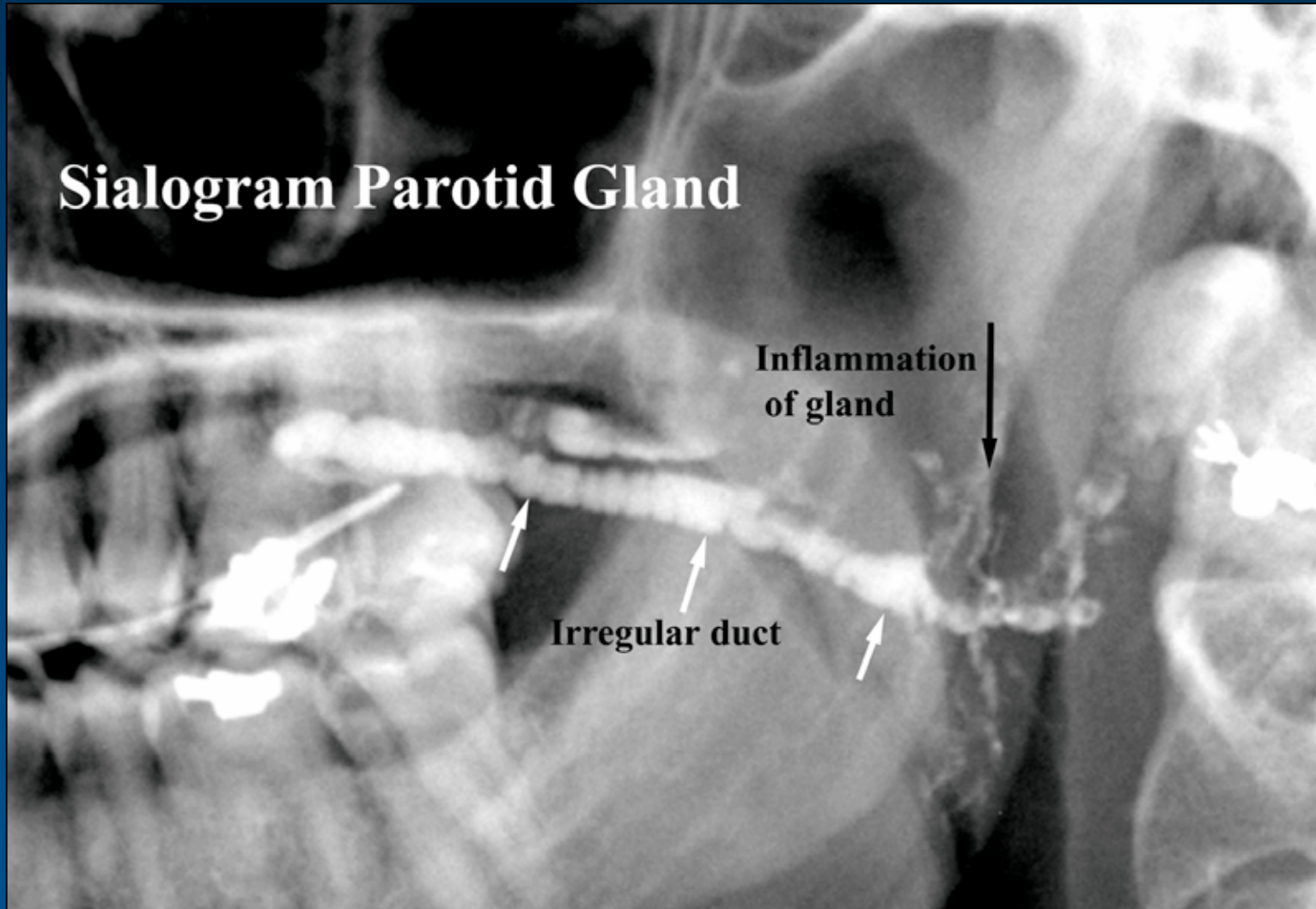
Diagnosis

Lavage

Lysis of adhesions

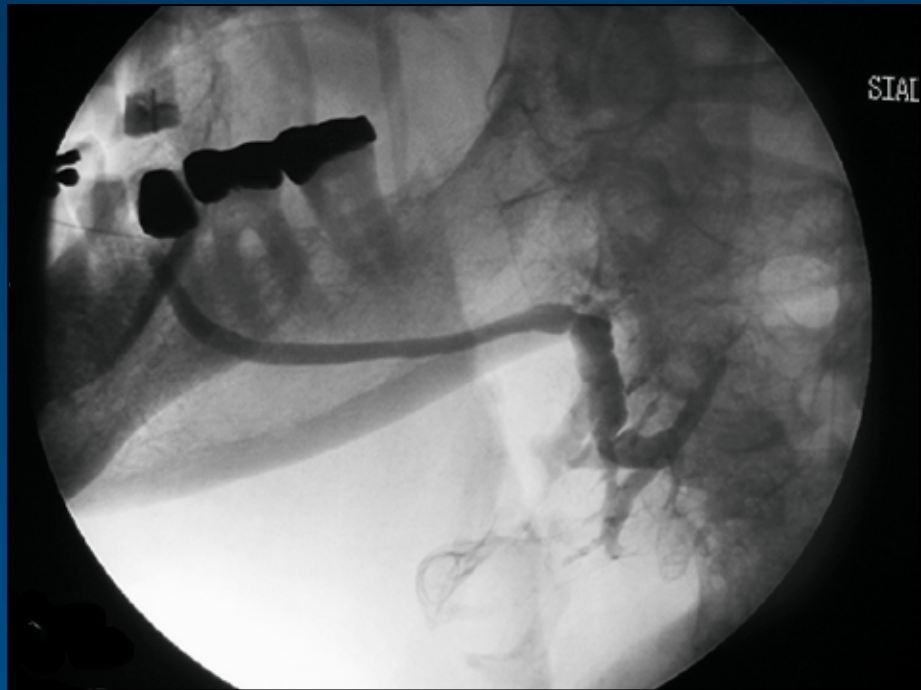


Sialography



Sialography Submandibular Gland

Regular technique



Digital subtraction



Sialography Parotid Gland Normal?



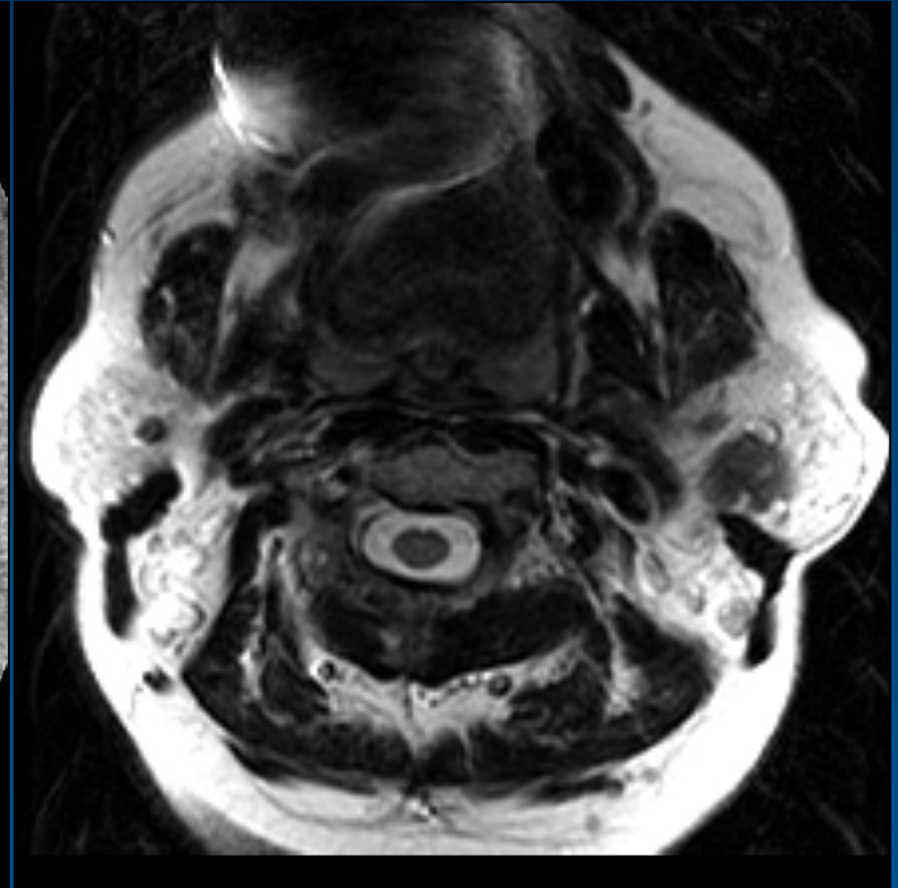
Sialography Parotid Gland

No – not normal

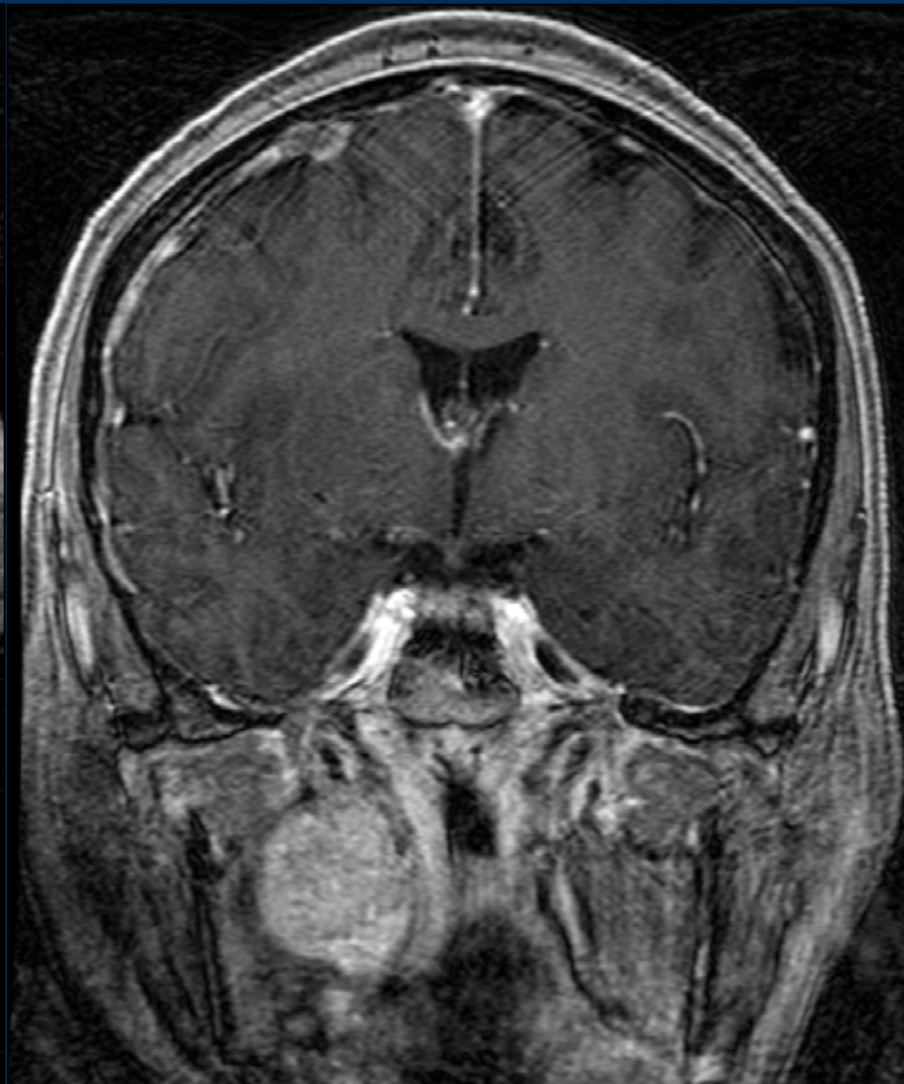
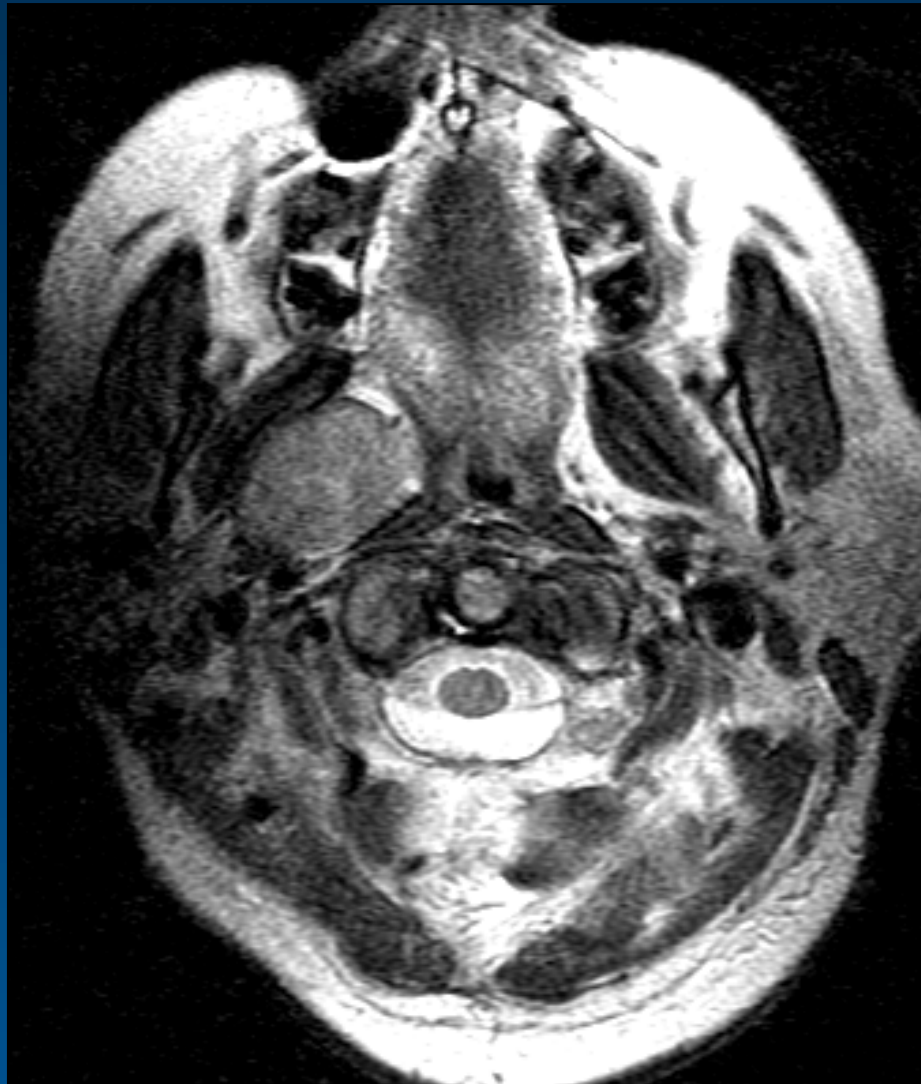
DSA sialogram



MR image

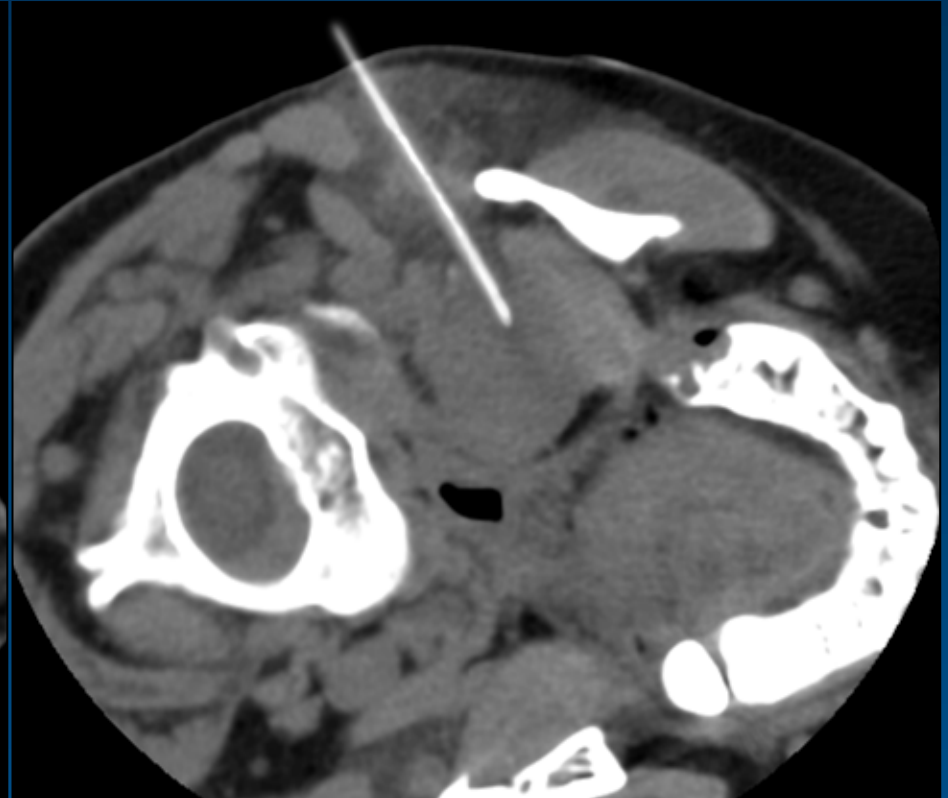
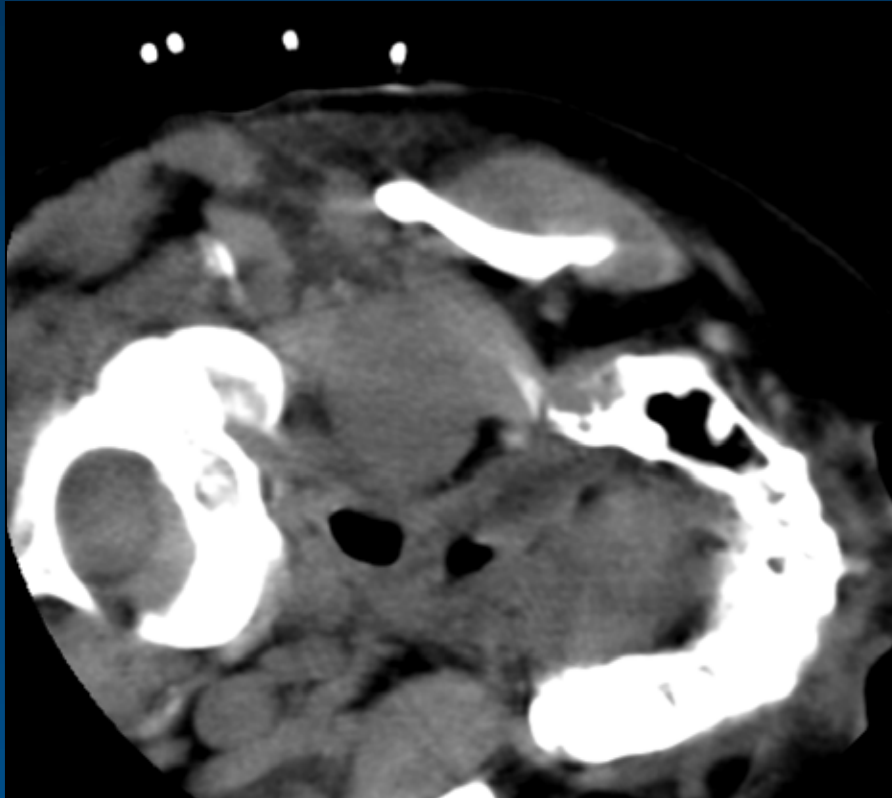


Biopsy of Deep Parotid Lesion



CT Guided Biopsy

Pleomorphic adenoma

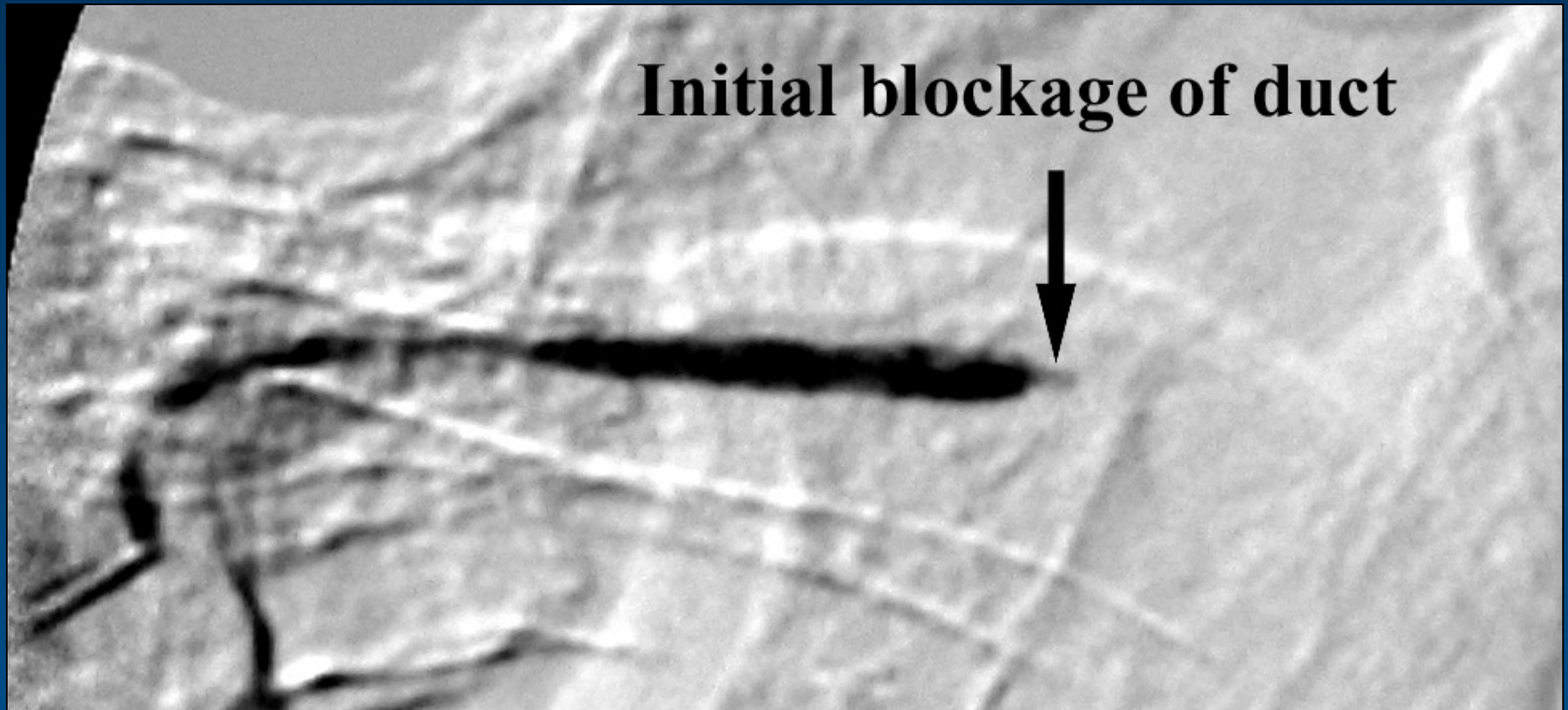


CT Guided Biopsy

Needle for core biopsy

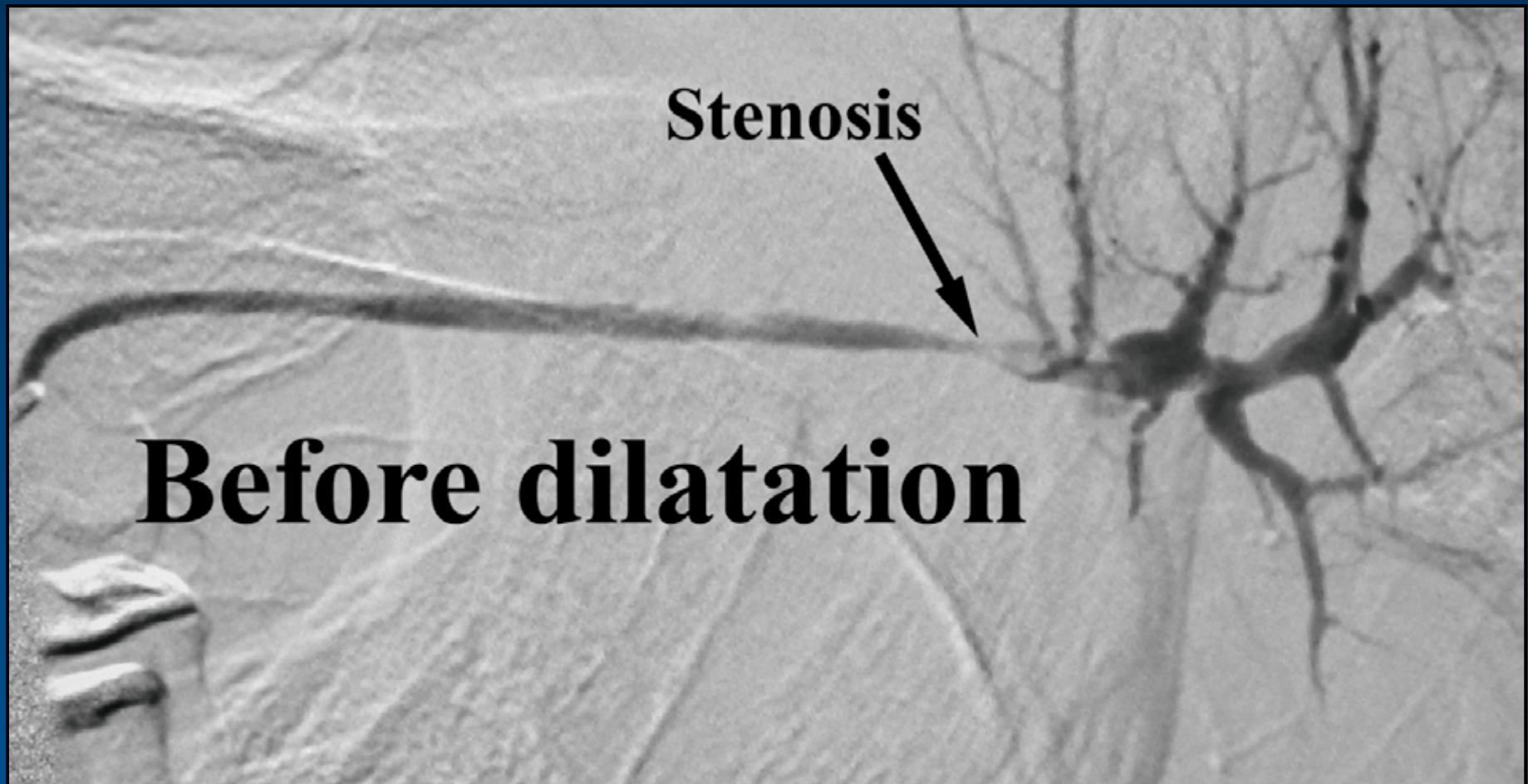


Interventional Sialography



Interventional Sialography

After penetration with guidewire

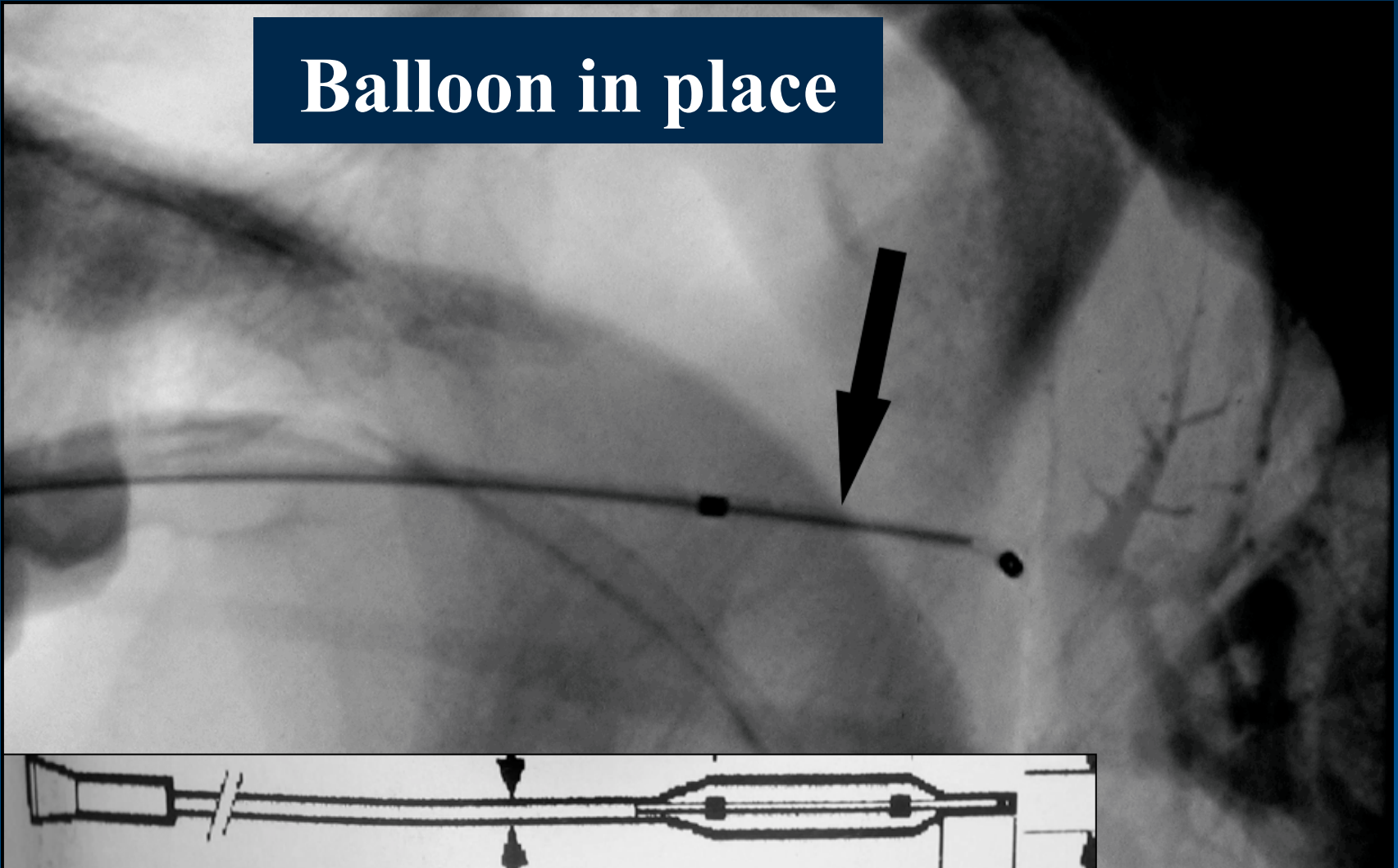


Balloon Dilatation



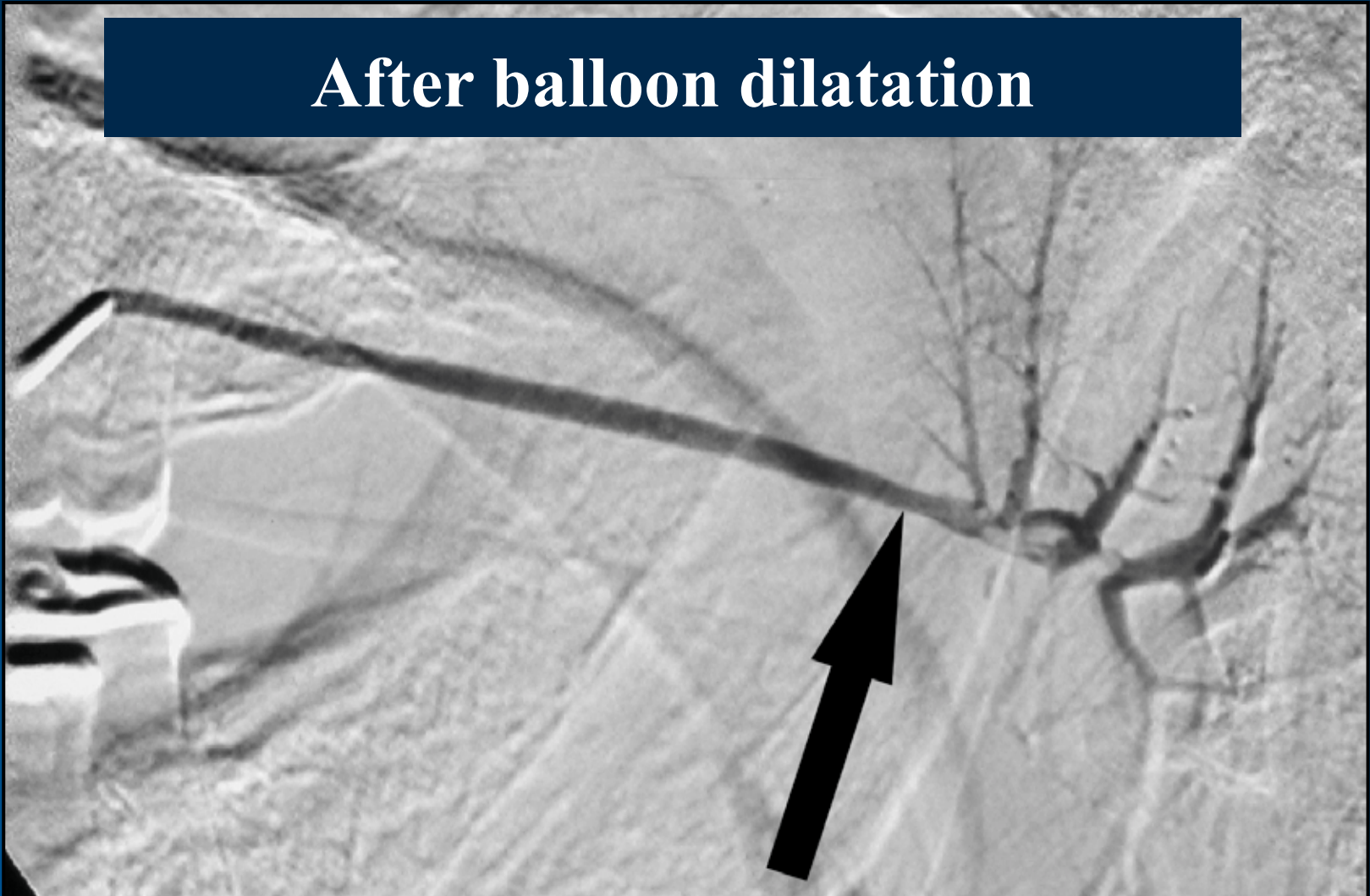
Balloon Dilatation

Balloon in place

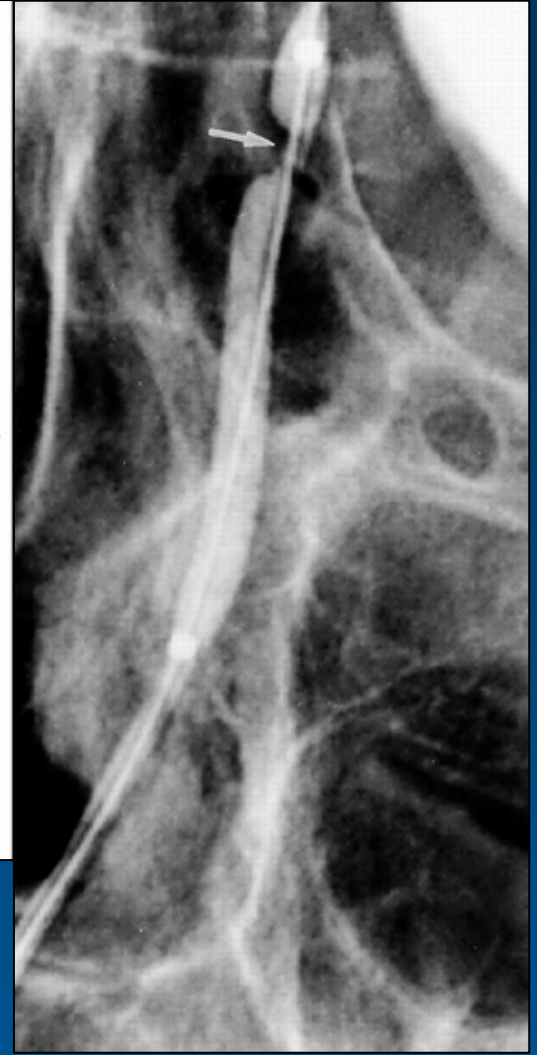
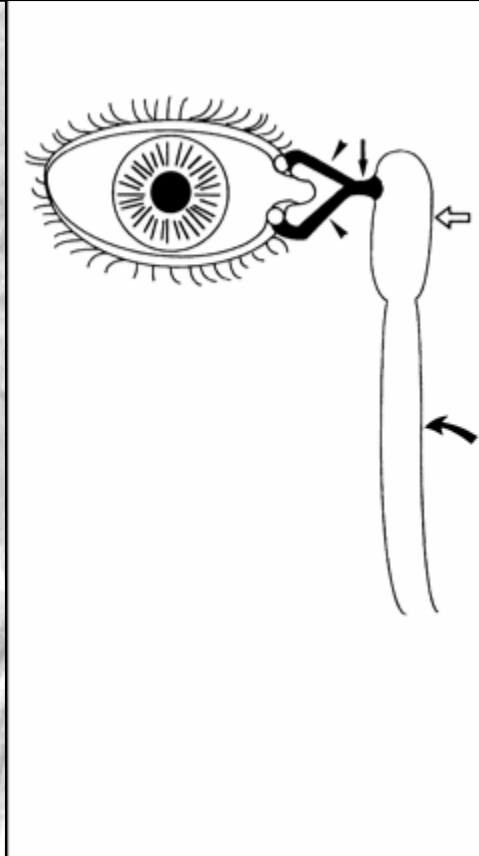
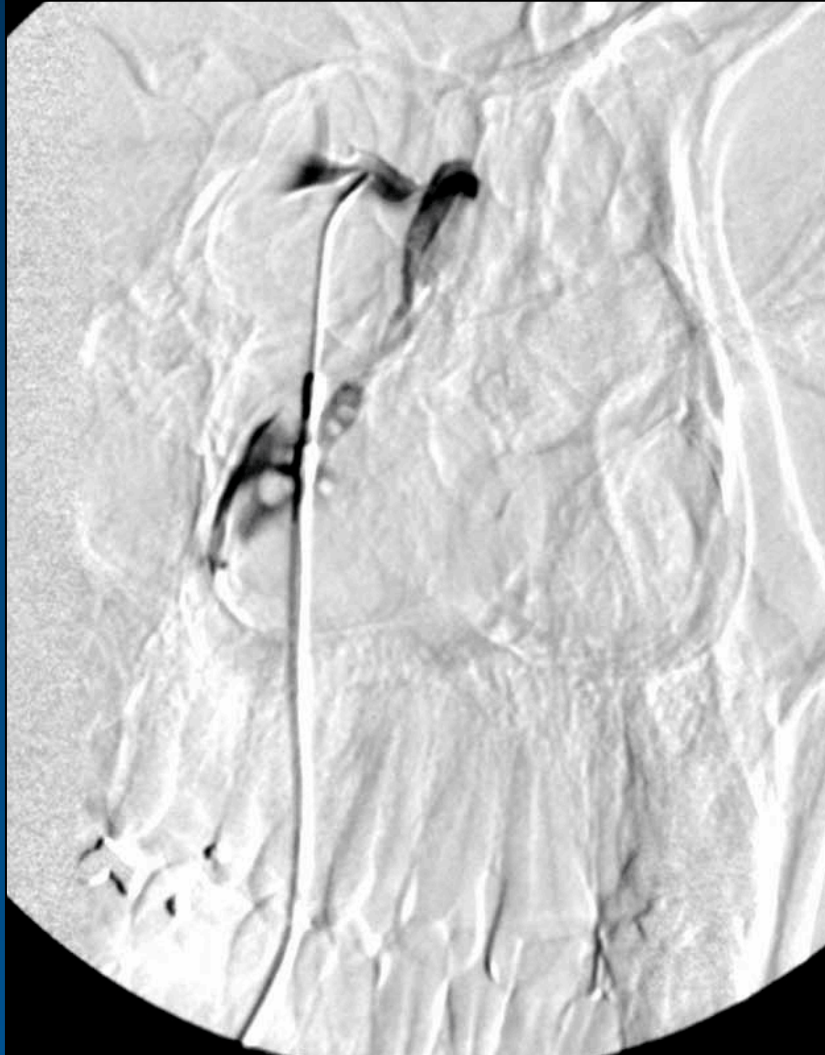


Balloon Dilatation

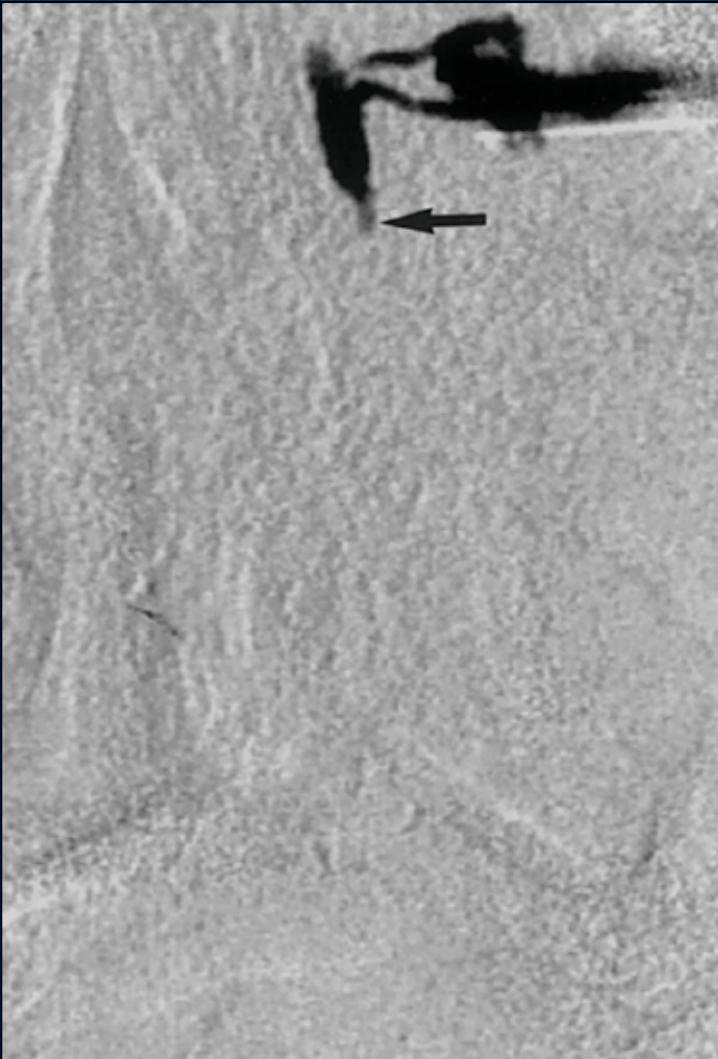
After balloon dilatation



Dacrocystogram

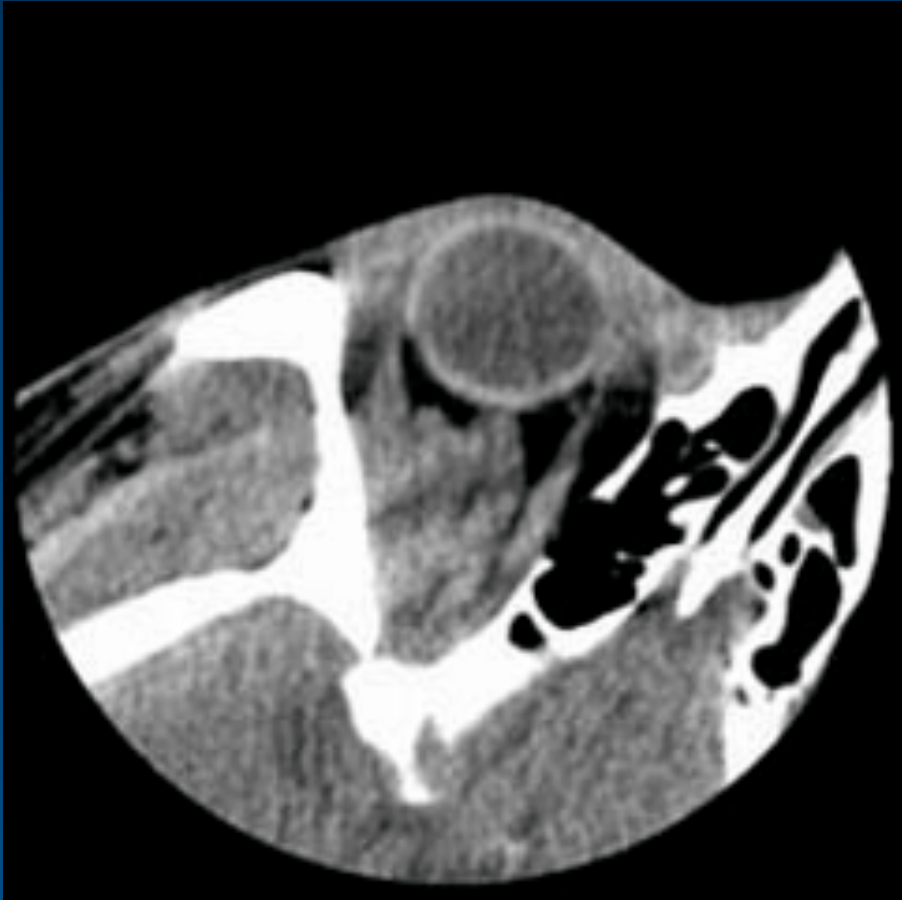


Lacrimal Duct Stenosis



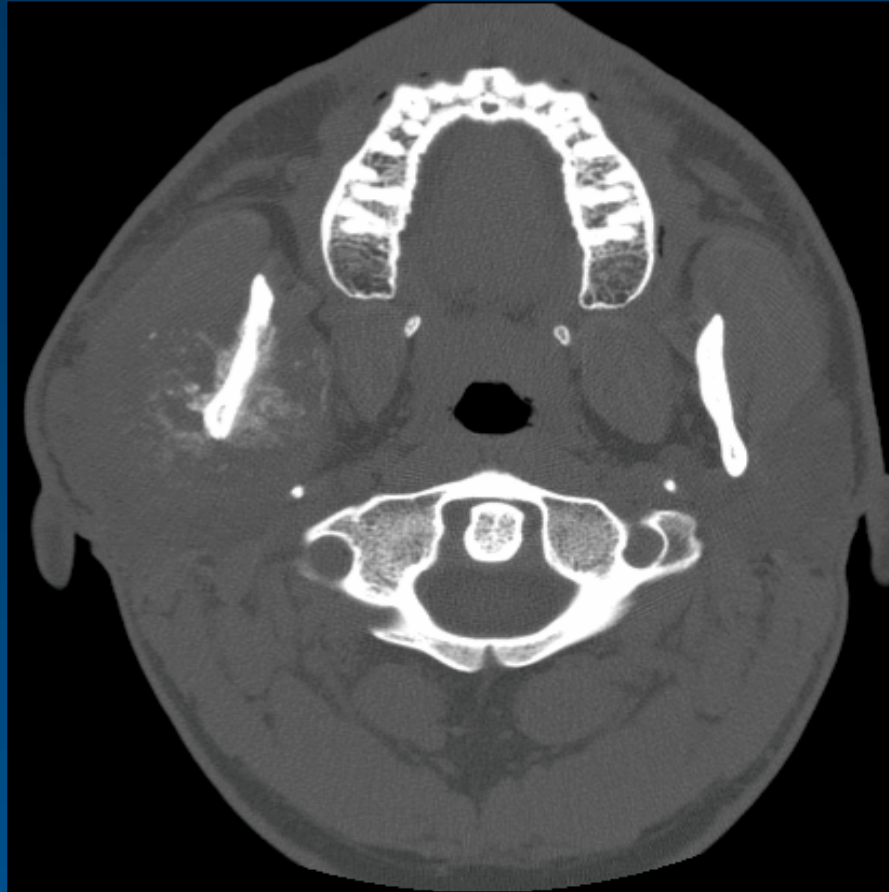
Biopsy of Orbital Lesion

Hemangioma



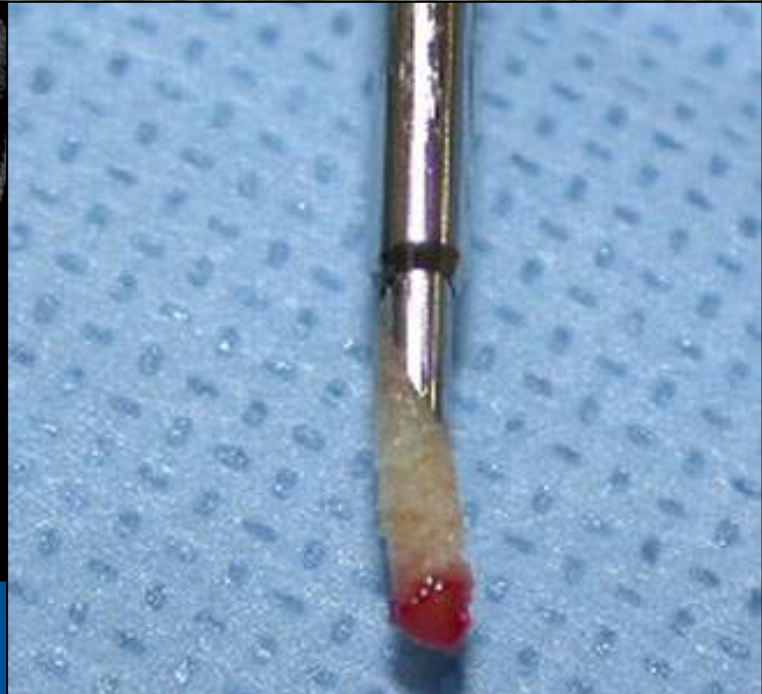
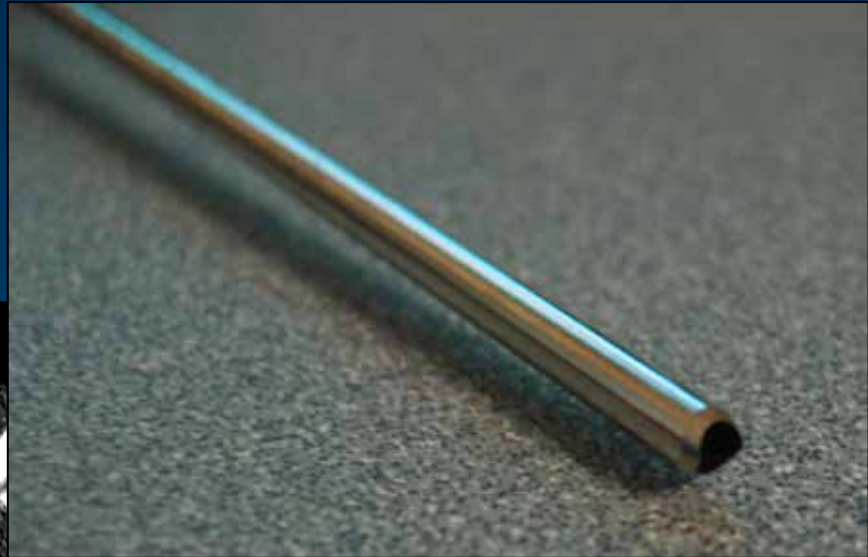
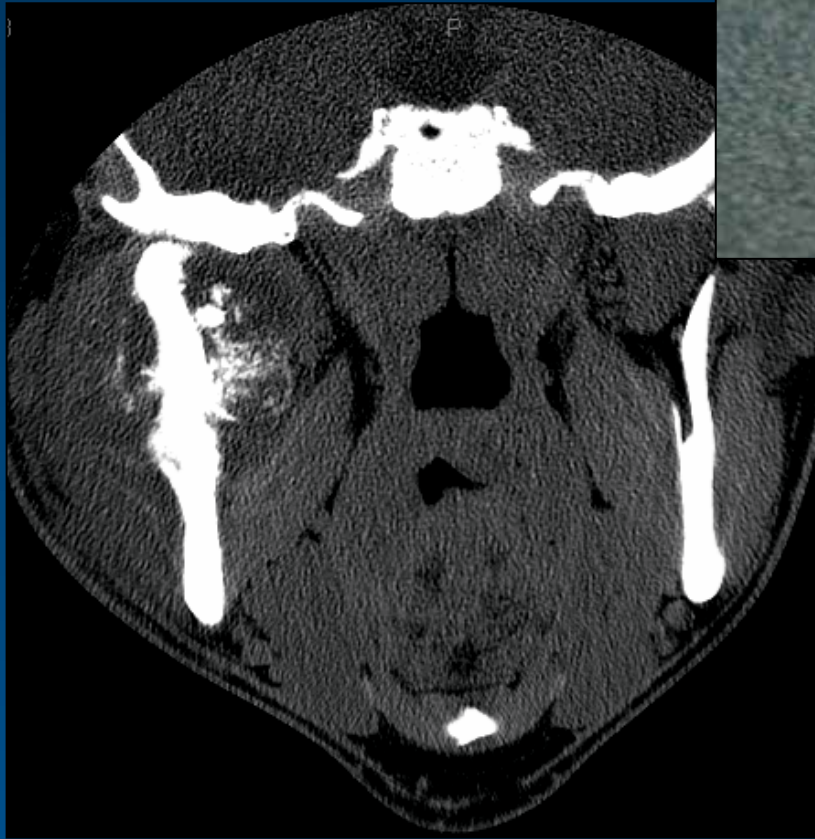
Biopsy of Orbital Lesion

Imaging can only take you so far
eventually you will need a diagnosis



Bone biopsy

Chondrosarcoma



Botox

Bruxism and tension headache

Hyper salivation

Perioral dystonia

ALS

CP

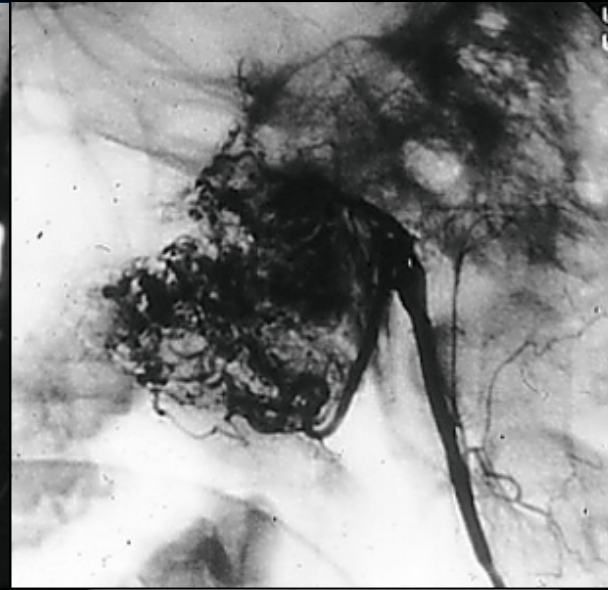
Drooling children

30 units parotid

15 units submandibular



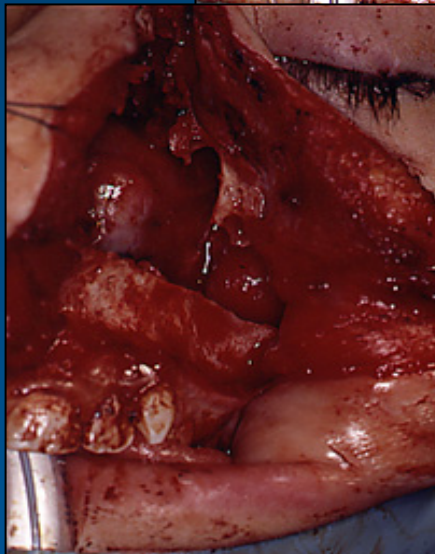
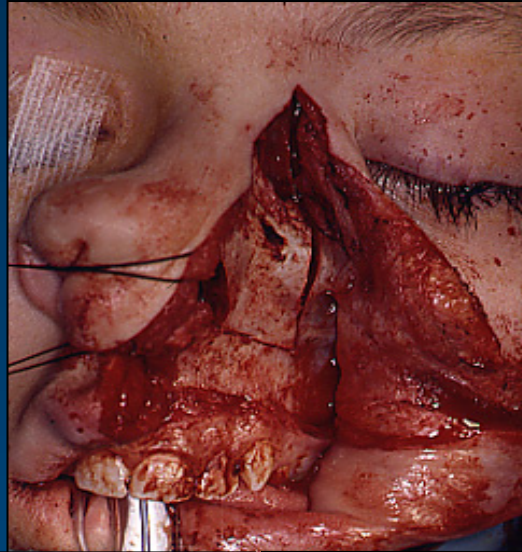
Embolization



Embolization



Surgery



Diagnostic procedures

- TMJ arthrography**
- TMJ arthroscopy**
- Sialography**
- Dacrocystography**
- CT and MR guided biopsy**

Therapeutic procedures

- Salivary gland duct balloon dilatation**
- Stone removals**
- Tear duct dilatation and stent placement**
- Botox in muscles of mastication**
- Botox in salivary glands**
- Embolization of nose bleeds**
- Embolization of vascular lesion**

SUMMARY

This poster illustrates different procedures in interventional maxillofacial radiology. All of them can be done on an outpatient basis with local anesthetics and moderate sedation. The procedures are minimally invasive and have essentially no morbidity and mortality. They provide a high diagnostic yield with little complications.