Interventional Radiology in Dentistry

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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

Sialogram Parotid Gland

- Inflammation of gland
- Irregular duct
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

Initial blockage of duct
Interventional Sialography

After penetration with guidewire

Stenosis

Before dilatation
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
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.