Dr. Olivier Julien

Doctorate in Dental Medicine
Laval University 2004

Multidisciplinary Residency at Royal-Victoria Hospital 2005

3 Year Certification in Orthofacial Orthopedics from the International Dental Institute (IDI) 2012

Dental Implantology Certification from IDI 2019

Proud father of four children
Hunter, fisherman...
We want to make this interactive despite the distance!

Please go to www.menti.com
Enter the following code: 62 13 25
1st case
Symptoms:

- Whitish tongue
- Adhering deposits
- Bleeding when scraping
- Discomfort can be associated
Diagnostic

1. Leukoplasia
2. Candidiasis
3. Chemical burn
4. Eating too much lactose

To refer or not to refer....
Clinical Case

A mother comes in with her 12 month old baby for his periodical examination. She is worried since her son does not have any teeth and he doesn’t exhibit any typical symptoms associated with teething. What would you do?

1) Recommend an x-ray to evaluate if the teeth are present
2) Refer to genetics to evaluate for a possible syndrome
3) Advise the mother that it is usual for babies to not have teeth at 12 months.
4) Reassure the mother
Approximative Eruption Sequence

6-6-6 Rule

- 1st tooth at 6 months
- 1st lost tooth at 6 years old
- 1st permanent molar erupts in oral cavity at 6 years old

3 years old... all deciduous teeth are present... (20)
Follow-up

The same patient returns for his 18 month old appointment. He still does not have teeth in his mouth.

What would you do?

A) Refer to a dentist
B) Refer to genetics
C) Order bloodwork
D) Wait and reexamine at age 2
Clinical Case

The father of a five year old boy comes in for the child's periodical exam. While probing regarding the patient's oral health, the parent complains that they are incapable to brush his teeth because the patient does not cooperate.

What would you recommend?

Share your ideas!
Preventative Care

Establish dental hygiene routine early on

Entice children and show excitement regarding oral hygiene

Preventing baby bottle tooth decay
- Sleeping with bottle
- Salivary flow vs sleep
### Rourke Baby Record

**Rourke Baby Record: Evidence-Based Infant/Child Health Maintenance**

**GUIDE IV: 18 mo–5 yr (National)**

**NAME:**

**Birth Day:**

**Gestational Age:**

**Birth Length:**

**Birth Wt.:**

**Birth Head Circ.:**

#### 18 months

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#### 2-3 years

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#### 4-5 years

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**GROWTH**

Use NID Health charts. Correct age until 24-36 months if < 37 weeks gestation.

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- **Avoid juice/sweetened liquids**
- **Avoid juice/sweetened liquids**

**EDUCATION AND ADVICE**

Repeat discussion of items based on perceived risk or need.

- **Injury Prevention**
- **Motorized vehicles/Car seat (child/booster)**
- **Child safety**
- **Child proofing**
- **Avoid falls**
- **Avoid burns**

- **Avoid fires**: Smoke detectors, fire sprinklers, fire extinguishers
- **Avoid burns**: Accidental fires, hot liquids, hot water

- **Food Safety**
- **Avoid processed foods**
- **Safety First**

- **Behavior**
- **Parent/Child Interaction**
- **Discipline**

- **Violence**
- **Avoid physical abuse**
- **Avoid psychological abuse**

- **Family**
- **Avoid child care/feeding/healthcare readiness**
- **Avoid social isolation**

- **Environmental Health**
- **Avoid second-hand smoke**
- **Avoid chemical exposure**

- **Other**
- **Avoid dental care/Dentist**
- **Avoid toilet learning**

**DEVELOPMENT**

Assessment and observation of milestones
Preventative Care
Baby Bottle Tooth Decay

Water Fluoridation vs Controversy
- Ottawa 0.7 ppm (Health Canada)
- Great way to offer baseline protection
- Proven effectiveness for all socio-economic background

Fluoridated toothpaste vs training toothpaste
  Supervision (8 years old)
  Grain of rice
Clinical Case

You are on call at a rural hospital. Parents come in to the ER with their three year old daughter advising you that she ingested two tubes of fluoridated toothpaste. What would you do?

A) Wait and observe
B) Administer an activated charcoal gastric lavage
C) Call CAS
D) Call Poison Control
Early Screening

Canadian Dental Association

- Dental exam by age 1
- Based on eruption
- Exam vs cooperation

Tell, Show, Do

Role modeling...
Follow CDA guidelines in order to prevent complications
- 6 months after the first tooth erupts
- Around 1 year of age (support +++)

Even if certain clinics are reluctant to see younger pediatric patients, do not hesitate to contact a dentist

Specialist?

If in doubt, a dental exam is required.
And when it happens...
Early Childhood Caries

3 yo girl. Baby bottle tooth decay missed previously. Following discussion with the foster family, the decision to treat with a partial prosthesis glued on remaining teeth was made.

Benefits:
- Phonetic
- Appearance (self-esteem)
- Nutrition
Treatment Modalities

Varies according to severity
- Number
- Extent of carious lesions (surfaces)
- Cooperation? Operative Field?

Different approaches to complete restorations:

1- Tell Show Do
2- N2O (adults vs gag)
3- Sedation + nitrous oxide
4- General Anesthesia
Steps Involved In Tooth Formation

Crown appears first

Root = eruption stimulus

Completely formed root = limited eruption potential +++

Large, open canal!
Prevention (trauma)

Dental Avulsion (tooth completely out)
Reimplantation delays vs root diameter
Cplx:
  - Necrosis
  - Resorption (internal or external)
Long term
  - Prognosis depends on reimplantation timeframe
Growth / Altered growth

Thumb sucking / Pacifier
(positive reinforcement)

Atypical lingual deglutition

Airway deficiency / tonsils

Short labial / lingual frenums
Pain Management With Infants

Teething:
- Teething ring
- Massaging gum tissue

Teething Necklaces
- Risks vs benefits
Oral Parafunctional Habits

Bruxism
Dental Clenching
Temporo Mandibular Joint Disorder (TMJ)
Obstructive Sleep Apnea

Reversible Approaches
Pharmacological Approach
Importance of Multidisciplinary Approach
Complex Rehabilitation
Botox Injections (research study)
Surgical Procedure

Pharmacological Management of Pain

Adapt patient care!!!
First line is to always optimize NSAIDS/ Acetaminophen Opioids?

QUIZ: Which country was the "world champion" in 2016 for opioid prescriptions?

https://www.ledevoir.com/societe/sante/469402/organe-international-de-controle-des-
Pain vs Antibiotics

Localised pain
Sinusitis?
Longer tooth
Cracked tooth syndrome

To prescribe or not to prescribe?
Quiz?
Pain vs Prescription

Not always obvious...
Acute thermal symptoms
Difficult to localize the one tooth
Acute pain

To prescribe or not to prescribe? Quiz?
Trypanophobia

Phobia of trypan dye...
Pain management vs anesthesia

- Xylocaine: use sodium bicarbonate as a buffer
- (pH of 5-7 for xylo and 3-5 for xylo with epi)
- Epi desactivates after 1 day
- Warm up to body temperature (37 degrees Celcius)
- Distraction (cell phone, games, etc)
- Pinch gently / rub skin / vibration close to injection site
- Small gauge needle (25, 27 or 30 G)

- Inject slowly +++
- Subcutaneous injection instead of intradermal
Clinical Manifestations of Systemic Diseases

Anemia

Pallor of the oral mucosa
Glossitis
Angular cheilitis
Recurrent aphthae

Mucosal hypersensitivity (BMS?)
Primary Herpetic Gingivostomatitis

Usually linked to HSV-1

6 months to 5 years old. Another peak in young adulthood

Often associated with painful oral mucosa that is erythematous and swollen

Vesicular

Tx: Less than 96 hours: Acyclovir

Immunocompromised: Acyclovir regardless
Diabetes

Variable clinical presentation
Periodontal involvement ...
Microangiopathy
Exaggerated inflammatory response

Healing impaired
Xerostomia:
- Prone to dental caries
- Hypersensitivity (mucosa, roots)
- Imbalanced pH and microbial flora
Xerostomia

Medications
- Antidepressants
- Diuretics
- Chemo/radiation (+++)

Tobacco products
Sjögren syndrome

Treatments:
- Artificial saliva
- Sugar-free gum
- Paraffin
- Meds: Pilocarpine?


Amalgam Tattoo vs Melanoma

Dark discoloration of peripheral soft tissues
Variable extent
Extraction site
Endodontic surgical site

Radiological evidence

https://ars.els-cdn.com/content/image/3-s2.0-B9780323552257000087-f008-033-9780323552257.jpg
Gingival Hyperplasia

Linked to 3 main categories of medications

- Anticonvulsant (ex: phenytoin, dilantin)
- Calcium channel blockers (ex: nifedipine, amlodipine, verapamil)
- Immunosuppressants (ex: cyclosporine)

Other: ex: erythromycin, sertraline
Gingivectomy

Linked to hygiene
Surgery
Pain
Recurrence

https://casereports.bmj.com/content/casereports/2013/bcr-2013-008679/F1.large.jpg

Anticoagulotherapy

CDA Statement (2nd opinion)
- Xarelto
- Eliquis
- Pradaxa

Coumadin (INR)
- Variability vs food
- Discontinued

ASA / Plavix
Multiple medications can predispose to oral ulcers

Most common include:
- NSAID’s (ex: indomethacin)
- Antihypertensives (ex: B-blockers)
- Immunosuppressants (ex: methotrexate)
- OCP
- Chemotherapy (ex: cisplatin)
- Antibiotics / antivirals

Tx:
- Magic mouthwash
  - Salted water
  - Gingigel
Bisphosphonates

Multifactorial (administration route, dose, frequency)

Other risk factors:
- neoplasia
- extractions / dental implants
- improperly fitted prosthesis
- glucocorticoids
- tobacco usage
- DM, preexisting dental pathologies

Communication is the key to minimize risks!
Neoplasia

Statistics

200 000 cases worldwide per year

100 000 deaths per year

In Canada in 2019:
- 5300 Canadians will be diagnosed
- 1450 will die

Oral cancers are frequently diagnosed at a later stage than other neoplasms. The survival rate at 5 years is 62%.
A 32 yo female presents to her GP with a lesion on her tongue which had been persisting for the past 3 months. She gave a history of chronic trauma (> 6 months) due to sharp cusps of teeth with which she associated the lesion.

On examination, a firm nodule of 0.5 cm x 0.4 cm was noted on the right lateral aspect of her tongue.

She was referred for an excisional biopsy of the lesion. The pathology revealed a squamous cell carcinoma (T1N0M0).
From the following list, which one increases the risk for developing oral cancer in patients?

A) HSV infection  
B) Diabetes  
C) HPV infection  
D) All of the above
#1 Oral Neoplasia: Squamous cell carcinoma

Other oral neoplasias:
- Salivary gland tumors
- Melanomas
- Osteosarcomas
- Basocellular (lips)
Risk Factors

Tobacco and alcohol

Age (Older than 60 yo)

Increase in cases in patients younger than 40, possibly linked to HPV

Populations (India / Asia) more at risk
  Betel nuts, chewing tobacco, periodontal disease and radiation

Possibly linked to immunosuppression

Alcohol + tobacco = 30X increased risk!
Mainly HPV 16, but also HPV 18

Linked to tonsillar and base of tongue cancers

No HPV testing recommended on biopsied cancerous lesions (no improvement in prognosis)

**Vaccines available to prevent this (but studies still required)!**

Approximately 10% of men and 3.6% of women in Canada and the USA can present with an HPV oral lesion and the prevalence increases with age.
Diagnosis

Initially, biopsy is required

When diagnosis is confirmed, CT with contrast in order to evaluate bone metastasis

+/- MRI if soft tissue must be assessed (depending on anatomy and structure)

+/- sentinel lymph nodes
Relevance Of Dental Exam Prior To Oncologic Treatments

Prevention!!!

Non-restorable teeth vs potential infection sites

Reduced dental intervention window
- Consultation
- Bloodwork results
- Delays?

Head and neck radiation
- Risk vs extraction
- Bone: Hypoxic-Hypocellular-Hypovascular (3H)
- Risk increases with time

https://cdn-prod.medicalnewstoday.com/content/images/hero/826/826817_826817_1100.jpg
Oncologic Treatment of Oral Lesions

Surgical for lesion resection
Sometimes radiation and brachytherapy
Rarely chemotherapy

Consequences
Xerostomia vs long term
Mucositis
Dysphagia
Agnosia

Awareness
Optimal hygiene
Cariogenic risk
Special Considerations

**Lip neoplasia:** squamous cell and basocellular

UV rays are a risk factor

**Tongue neoplasm:**
Often more aggressive in patients younger than 40

Disseminates more frequently than other oral cancers to lymph nodes

**Mucous membrane neoplasia:** often missed. Looks like an infectious process or a TRAUMA
Self-exam / Family MD Role

Studies aren't proving that screening saves lives.

Therefore, not all organizations are recommending it systematically.

People with increased risk factors could benefit.

For example, tobacco usage, excessive ROH, previous oral neoplasia, sun exposure ++.

Check if your patients are seeing a dentist on a regular basis.
Screening / GP Role

Frequently, edentulous patients do not see a dentist. It is important for GP's to recommend it.

Dentures are changed on average every 7-10 years by a denturist.

Large time gap for soft tissue examinations.
Screening Exam For Lesions

On inspection, we are looking for a white or red lesion in the mouth. Ulcers that do not heal, mass, fibrosis, spontaneous bleeding.

Required Material: tongue blade, 2x2, optimal light source

A) Extraoral Exam

1. Position patient in an upright sitting position.
2. Inspect the head and neck region for asymmetry, swellings or other discrepancies.
3. Palpate the submandibular, neck and supraclavicular regions for lymph nodes.
4. Inspect and palpate lips and perioral tissues.

Screening / GP Role

II. Intraoral examination

1. Position the patient in a semi-reclined position.

2. Examine all oral soft tissues sequentially.
   
   • Buccal and labial mucosa
   • Mandibular buccal and lingual gingiva and retromolar pad (trigone)
   • Maxillary buccal and palatal gingiva
   • Hard and soft palate, tonsillar tissues and uvula
   • Floor of mouth (including the mandibular lingual vestibule)
   • Tongue — dorsal, lateral and ventral surfaces

https://www.cda-adc.ca/cda/vol-72/issue-5/413.pdf
Screening / GP Role

Make note of any tissue swellings, changes in colour, texture, symmetry, areas of tenderness or changes in tissue mobility.

Examine visually and palpate the most common anatomical sites of oral cancer: the ventral–lateral tongue, floor of mouth and soft palate complex.

These are the sites of 60% of cancers of the oral cavity.
To Summarize...

Interprofessional collaboration is very important between physicians and dentists.

Oral health is in direct link with systemic health.

The family physician has an important role in regards to educating / promoting dental care.

Never hesitate to communicate with a dentist!