Dental Management of Pregnant Women

Presentation based upon DHSV Clinical Practice Guidelines

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1) To inform the Peninsula Health Community Dental clinical staff on the Current DHSV Clinical Practice Guidelines for dental care management of the pregnant woman.
Advise Risks –

- Periodontal disease
- Importance of OH
- Transfer of streptococcus-mutans and lactobacillus (gram +ve bacteria) from mother to baby.
  - Use CPP-ACP products to reduce bacteria.
    - GC Tooth Mousse
    - 3M ESPE Clinpro Tooth Cream (t/paste)

Educate on:

- Periodontal disease & effects on fetus
- Educate Mothers-to-be on OH for their baby
Any concerns regarding the safety of the pregnancy or impact of the proposed treatment should always be discussed with the responsible lead maternity carer.

Discuss & advise on:

- Associations between poor periodontal health & adverse effects on the pregnancy and fetus
- OHI
- Diet
  - Calcium & Vitamin D
    - Milk, cheese, dried beans, leafy green vegetables
    - Cheese has pH neutralising benefits after meals
  - Oral Vitamin D supplement if serum levels are low
- Use of CCP-ACP products
  - GC Tooth Mousse
  - Recaldent and/or Xylitol Gum
- Fissure sealants
- Plaque & calculus debridement
- Dental plan during & post-pregnancy
- Oral hygiene care advice for infants
  - Tooth development & eruption timeline
  - When to first visit dentist
Questions regarding the woman's **medical** history should include:
- Any current or previous pregnancy complications
- Previous spontaneous complications
- Pernicious vomiting
- Present or past tobacco use

Questions regarding the woman’s **dental** history should include:
- Any symptoms of pre-existing oral conditions
- Current oral hygiene homecare practice
- Previous dental examination and/or treatment
- Previous radiographic exposures

Questions regarding the woman’s **dietary** history should include:
- Exposure to carbohydrates and acidic foods/beverages related to increased snacking
- Quantity consumed per day
- Timing of consumption
- Frequency of intake
Risks associated with Pregnancy

- Pregnant women who are at risk of infective Endocarditis
  - Primary prophylaxis is with Amoxicillin 2.0g given orally one hour before the procedure.
  - Penicillin-allergic women can be treated with Clindamycin 600mg orally.
- No increased risk of preterm birth (<37 weeks gestation), spontaneous miscarriage, still births or fetal abnormalities associated with essential dental treatment.
  - Essential dental treatment is defined as presence of moderate to severe dental caries, fractured or abscessed teeth.
- No association between maternal general dental care during pregnancy and gestational age, birth weight or neurodevelopment.
- Most comfortable and safest time to treat pregnant woman is during the 14th to 20th weeks of gestation.
- Elective dental treatment should be avoided during the 1st trimester.
- Elective dental treatment should be avoided in the second half of the 3rd trimester as premature birth is a risk.
- Amalgam restorations are considered safe for pregnant woman and their baby when handled appropriately.
Oral manifestations – pregnancy related

- **Pregnancy granuloma**
  - Occurs in 5% of pregnancies
  - Most common after first trimester, grow rapidly and recede after birth.
  - Observational management, unless bleeds, interferes with mastication or doesn’t resolve after birth.
  - Lesions removed during pregnancy likely recur.

- **Loose teeth**
  - Increased levels of progesterone and oestrogen affect the periodontium
  - Can result in mobility of teeth, even in absence of periodontal disease
  - Need to assure these patients that this is temporary mobility and that teeth will not be lost due to this hormonal change.

- **Ptyalism & Perimylolysis**
  - Ptyalism (excess saliva) – common during early pregnancy, usually accompanies nausea.
  - Perimylolysis (acid erosion caused by vomiting of gastric contents) - Rinsing with one teaspoon sodium bicarbonate (baking soda) dissolved in water helps neutralise pH & minimise effect on oral environment.

- **Xerostomia**
  - Caused by hormonal changes, effects 44% pregnancies.
  - Relief through chewing sugar-free gum or salivary substitutes (GC Dry-mouth Gel, Biotene Gel)

- **Medications** – see therapeutic guidelines
- **Smoking** – need to discuss impact on pregnancy
Drugs & Pregnancy

- Nitrous oxide (oxygen anesthesia) – not recommended during pregnancy
- Local anesthetics – What should we be using?
  - Doses of adrenalin used in dental LA are so low that they are unlikely to significantly affect uterine blood flow.
  - The benefits of adrenalin at dental concentrations justify their use.
  - 3% Citanest® with Octapressin® can be used within dosage guidelines of 1→5mL or (30→150mg Prilocaine hydrochloride 3% with felypressin 0.03 IU/mL).
  - Gross overdose of Prilocaine can cause Methaemoglobinaemia – this has been reported for doses exceeding 600mg.
  - Methaemoglobinaemia is the condition that describes abnormally high levels of methemoglobin in the blood. This is a type of hemoglobin which doesn’t bind to oxygen and thus less oxygen transportation throughout the body can cause tissue hypoxia.
  - Prilocaine may enter the mothers breast milk, but in small amounts generally no risk to baby.
  - It is not known whether felypressin is excreted in breast milk.
Supine Hypotensive Syndrome
- Affects 8% pregnancy’s
- Can cause hypotension, nausea, dizziness, fainting, loss of consciousness
- Treat by rolling pt on left side
- Prevention – place rolled towel on pt’s back (right side) prior to reclining chair
Dental Radiography

- Max dosage to fetus = 1mSv
- 2x Bw radiographs = 0.002 → 0.004mSv dosage
- Lead apron with thyroid collar is necessary
- Increased risk with maxillary occlusal radiographs due to the angle of the cone.
- No need to defer dental radiography during pregnancy on the grounds of radiation protection, however if treatment is deferred then radiography should be deferred also.
Pregnant Staff

- Radiation dose limit to fetus same as general public at 1mSv.
- Nitrous Oxide use:
  - Gas detection system required to monitor scatter
  - Pregnant staff to avoid this area
- A TLD can be arranged (personal monitoring device) from the radiology department. Please consult your Team Leader to request.
Early Childhood Caries (ECC), previously known as bottle or nursing caries

Nursing or Bottle caries is now identified as a subset of ECC, not the single cause.

**ECC** = At least one carious lesion in child with full deciduous dentition.

**SEVERE ECC** = Age Dependent

- <36months old = Smooth surface carious lesion affecting max. ants.
- DMFT scores relative to child age:
  - **Age** | **DMFT score**
  - 3yo | 4
  - 4yo | 5
  - 5yo | 6

In Australia:

- 40% of children under 6yo have some dental decay.
- 60% of these children are untreated.

Short-term consequence of untreated ECC are pain and abscess

Long-term consequence of ECC are:

- Delayed growth       Disrupted social development
- Nutritional deficiency Disrupted academic development
- Sleep deprivation    Reduction in general physical health
- Traumatic experiences Cost of Tx & time off work for parent

Stats & Info sourced 27/06/2011:
De Silva-Sanigorski et. al. BMC Public Health 2010 10:97
The VicGeneration study – a birth cohort to examine the environmental, behavioral and biological predictors of early childhood caries: background, aims and methods.
Thumb Sucking

- **Cause:** prolonged sucking of dummy, thumb or digit.
- **Malocclusion:**
  - Protrusion of maxillary incisors
  - Narrowing & lengthening of maxilla
- **Maxillary Anterior Overjet**
- **Posterior Bilateral Cross-bite**
- **Orthodontic Implications**
- **Speech, mastication, social, trauma >risk.**
- **WHY?** – comfort, unconscious action
- **Treatment:**
  - Removal of dummy
  - Substitution with soft toy, blanket etc.
  - Over the counter ointments (to place on thumb/digit) as deterrent – available from pharmacy.
  - Fixed orthodontic appliances (palatally fixed) to prevent sucking of thumb/digit.
  - Education for parent and child.
    - Once child is little older & understands consequences of thumb sucking they are more inclined to reduce or stop this behavior.
  - Orthodontic intervention.