Dental Caries Indices

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Lecture Outline:

- Dental caries indices

- The component of DMF

- Principle and rules in recoding of DMF

- Some questions and calculations

1. **Coronal Caries Index :**

a. **Permanent teeth index:**

DMF: Decayed-Missing-Filled Index (DMF) which was introduced by Klein, Palmer and Knutson in 1938 and modified by WHO
DMFT and **DMFS**

The components of DMF

❖ (D) component:

1. Carious tooth.

2. Filled tooth with recurrent decay.

3. Only the root are left.

4. Defect filling with caries.

5. Temporary filling.

6. Filled tooth surface with other surface decayed .

The components of DMF

❖ (M) component:

1. Tooth that extracted for reasons other than caries should be excluded, which include: a-Orthodontic treatment.

 b-Impaction.

  c-Periodontal disease.

 2. Unerupted teeth.

 3. Congenitally missing.

4. Avulsion teeth due to trauma or accident .

The components of DMF

❖ (F) component:

crown placed because of previous decay, filled without primary or secondary caries

Teeth stored for reason other than dental caries should be excluded, which include:

1. Trauma (fracture).

2. Hypoplasia (cosmetic purposes).

3. Bridge abutment (retention).

4. Seal a root canal due to trauma.

5. Fissure sealant.

Principles and rules in recoding of DMF

❑ DMFT:

A tooth with several fillings counted as one tooth

A tooth with filling on one surface and caries on the other counted as decayed

No tooth counted more than once, D M F   or sound

❑ DMFS:

Each tooth was recorded scored as 4 surfaces for anterior teeth and 5 surfaces for posterior teeth.

Retained root is (4 D) for anterior teeth,(5 D) for posterior teeth

Missing tooth is (4 M) for anterior teeth, (5 M) for posterior teeth

Tooth with crown is (4 F) for anterior teeth, (5 F) for posterior teeth

a. Primary teeth index:

- ➢ dmft /dmfs

- ➢ deft /defs

- ➢ dft / dfs

c. Mixed teeth index:

2. **Root Caries Index (RCI):**

which was introduced by Katz in 1979

Rules for recording

➢ All teeth are examined in both lower and upper arch

➢ To obtain the RCI, each of the four surfaces the mesial, distal, buccal (labial), and lingual, of a root are examined for a single tooth

➢ When multiple types of root surfaces are exposed, the most severely affected root surface be recorded for that tooth

Some questions ???

How could you differentiate between tooth missing due to caries and due to exfoliation?

- ✓ By age
- ✓ The shape of ridge is concave in carious missing tooth and straight in exfoliated one and permanent successor may be seen
- ✓ DMF/dmf index is higher in association with carious missing tooth especially adjacent and the contra lateral teeth
- ✓ Bad oral hygiene mainly associated with carious teeth

Some questions ???

How could you differentiate between tooth missing due to caries and due to orthodontic treatment?

- ✓ In ortho. treatment most teeth should be extracted are 4,5/c, d while in carious missing teeth any teeth may be involved
- ✓ Bilateral and /or opposing missing generally associated with ortho. treatment, while in carious missing teeth it is not necessary.
- ✓ DMF/dmf index is higher in association with carious missing tooth especially adjacent and the contra lateral teeth with bad oral hygiene mainly associated with carious teeth.
- ✓ Crowding or appliance may be seen in ortho. treatment   .

Calculations

➢ Maximum score: Minimum score = Zero

■ DMFT = 32
■ DMFS = 12 * 4 + 20 * 5   = 48 + 100   = 148 or   128

➢ Maximum scores:
■   dmft = 20   ,   dmfs = 88

➢ The calculation of RCI:

■ RCI = $\underline{(R\text{-}D) + (R\text{-}F)}$ x 100
                                          $(R\text{-}D) + (R\text{-}F) + (R\text{-}N)$