

MINIMAL INVASIVE DENTISTRY

Colloquium SEPTEMBER 2012
Faculty of Dentistry, UiTM

SPECIFIC LEARNING OUTCOMES

Participant should be able to:

- Understand the concept of MID
- Able to apply the concept in daily clinical practices and during student's supervision

INTRODUCTION

- **GV Black Concept** – extension for prevention
- **Minimal Invasive Dentistry**
- Education, direct patient for self-care, prevent or healing caries in the first place, minimize the operative intervention, conservation of tooth structure
- **Remineralization of any enamel margin** that is not yet cavitated
- **Remineralization of the lesion floor** (GIC placement as base or as temporary)

UPDATES

- ICDAS – International Caries Detection and Assessment System

<http://www.icdas.org.uk>

E-learning packages download free

- Aiming for ICCMS – International Caries Classification and Management System

CONTEMPORARY CARIES MANAGEMENT

1. Accurate diagnosis of disease and lesions
2. Prevention
3. Just in time restoration
4. Minimally invasive operative procedure
5. Prevention of recurrence

REMINERALIZATION

Existing / New therapies for lesion:

- Fluorides (professional application)
- Xylitol – widely used in Scandinavia
- CPP- ACP = CaseinPhosphoPeptide- Amorphous Calcium Phosphate (Morgan et al. 2008 Caries Research 42; 171-164)
- ICNARA 2 (Special Issue in Advances in Dental Research January 2012)

AIMS of MID CONCEPT

- Good peripheral seal at kavo-surface to prevent microleakage from bacteria and fluids
- Eliminate surface cavitation
- Prevent plaque accumulation

DEFINITIONS OF SITES

- **Site 1** = pits, fissures and enamel defects on occlusal surfaces of posterior teeth or other smooth surfaces
- **Site 2** = approximal enamel in relation to areas in contact with adjacent teeth
- **Site 3** = the cervical one third of the crown or, following gingival recession, the exposed root

DEFINITIONS OF SIZES

SIZE 0

Initial lesion at any site that can be identified but has not resulted in surface cavitation

SIZE 1

The smallest lesion requiring operative intervention. Cavity is beyond healing through remineralization

SIZE 2

A moderate sized, sufficient sound tooth structure to maintain the integrity of the tooth and accept occlusal load

SIZE 3

The cavity needs to be modified and enlarged to provide protection for the remaining coronal tooth structure

SIZE 4

Cavity is extensive with loss of a cusp or involved incisal edges from an anterior tooth

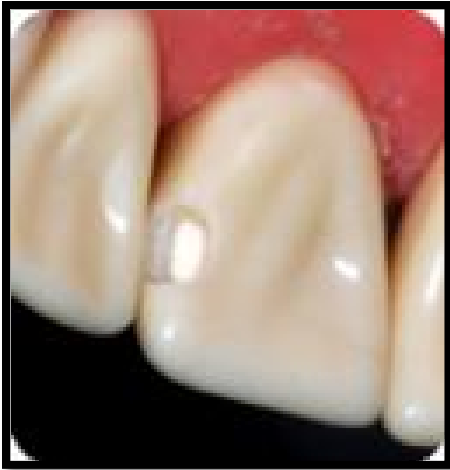
SITE 1

- Lesions located at the pits and fissures on the occlusal surface of posterior teeth and other smooth enamel surfaces



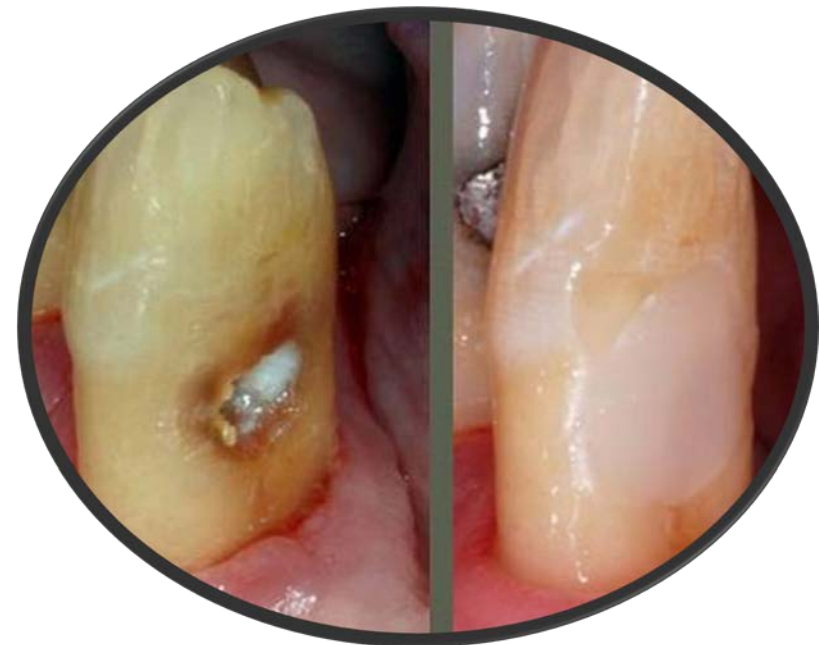
SITE 2

- Lesions that are on smooth surface at interproximal surfaces of anterior/ posterior teeth, usually slightly gingival and not involving the incisal edges/ occlusal surfaces



SITE 3

- Lesion located in the cervical region anywhere around the full circumference of a tooth including exposed root surface following recession

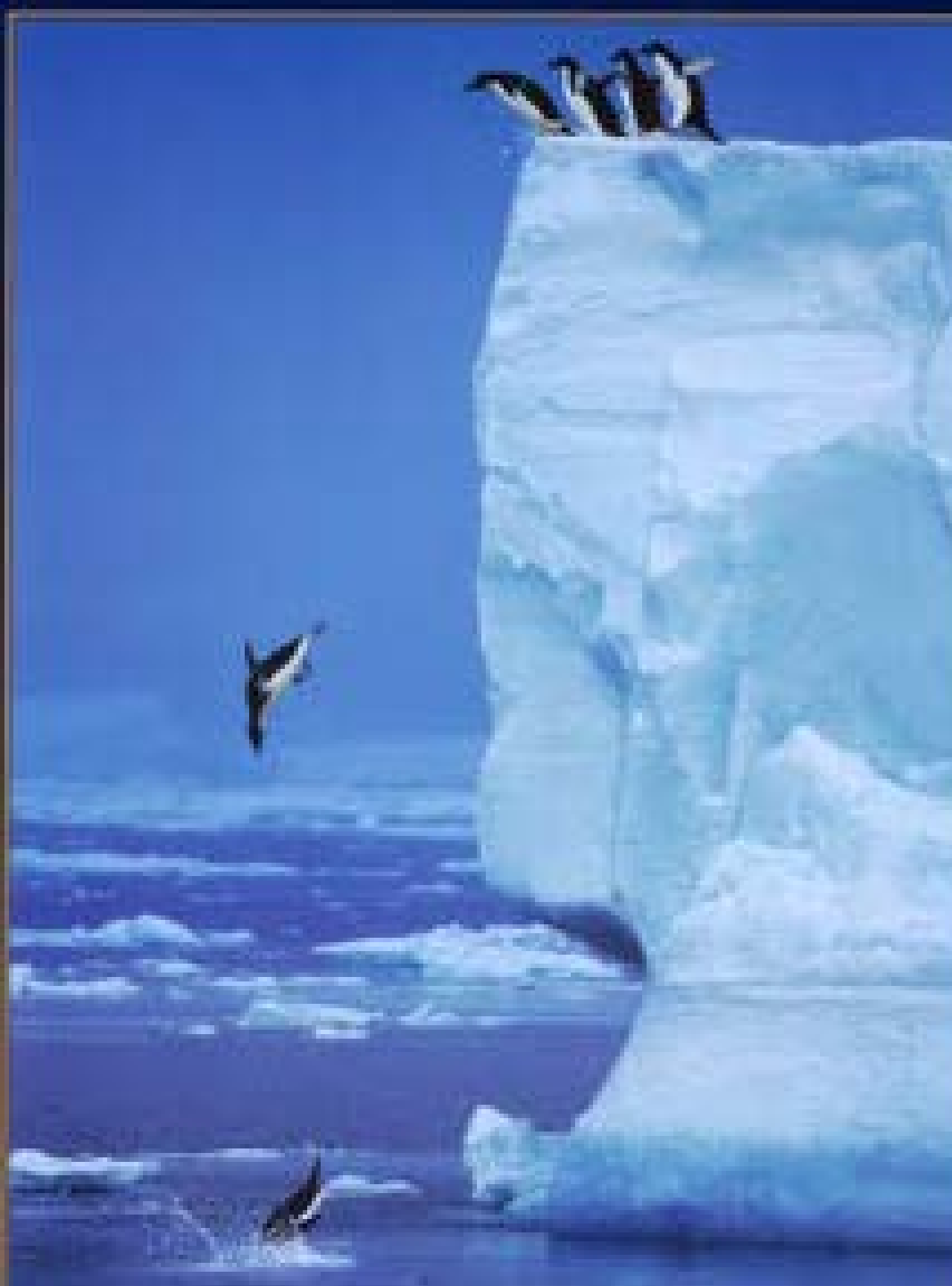


SUMMARY

- Patient is treated as a WHOLE, not as a 'HOLE'
- Students operative requirements not included during MDC or other clinical session EXCEPT in Operative or Prosthodontics clinic
- MICD – Minimally Intervention of Cosmetic Dentistry

REFERENCES

1. Graham J Mount. Minimal Intervention Dentistry: Cavity Classification and Preparation. J Minim Interv Dent Intervention in Dentistry 2009; 2 (3)
2. Summit JB et al. Fundamentals of operative Dentistry. A contemporary approach. Third Edition; Quintessance (2006)
3. Edwina AMK. Pickard's Manual of Operative Dentistry. 8th edition; Oxford (2006)
4. Mount GJ & Hume WR. Preservation and Restoration of Tooth Structure. 2nd edition (2005)



**SUCCESS IS NOT
FINAL
FAILURE IS NOT
FATAL**

**IT IS THE COURAGE
TO CONTINUE
THAT COUNTS**

Sir Winston Churchill