



Interventional Preventive Caries Management: Time to Shift the Paradigm

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Dental Caries is a chronic, multifactorial plaque-based disease that destroys the affected teeth. It gravely affects one's life quality and causes substantial monetary burden on suffering individuals and communities. Decayed teeth have a significant impact on an individual's general health, nutrition and growth due to discomfort, pain and night sleeplessness. In kids, it enhances learning disorders and subsequent failure to do homework. In adults, it causes limitation in functioning and routine performance. Distress of a person from dental caries has been reported in various studies as one of the major causes of absenteeism from schools or workplaces.

It has long been considered as an irreversible disease of hard tissues of the teeth and accordingly treated by surgical intervention of the carious tissue followed by restoration with some restorative material. Current research has proved that caries is a dynamic disease having alternating phases of demineralization of hard tooth tissues followed by remineralization. It can therefore, be controlled by clinical intervention on microbial plaque formation and maturation or altering the dynamics of apatite crystal.

Chemical plaque control using chlorhexidine is recommended for patients at high caries risk. It is commercially available in the form mouth rinses and varnish for clinical application to reduce the caries causing bacteria - *Streptococcus mutans*. The use of fluoride gel or varnish is considered the most scientifically proven method for avoiding caries incidence and restricting the rate of existing caries progress. Fissure sealing is an effective way of monitoring occlusal caries in posterior teeth when the patient's caries risk has been assessed and eruption age of the tooth is taken into account. Use of confections incorporated with Casein Phosphopeptide-amorphous Calcium Phosphate has shown proven anti-cariogenic activity. Consumption of Xylitol containing chewing gums also plays significant role in caries prevention. This is an interventional preventive caries management termed in dental literature as "Medical model of caries management".

It is observed with great surprise and bewilderment that the most dentists globally show a mind-set towards management of the clinical caries. They continue treating it in the same traditional manner through drilling and filling. To find out whether dental practitioners and students are aware of these non-invasive modern strategies to manage caries or not, many studies have been done across the globe. The findings of these studies indicate that dentists and dental students are well aware of these preventive and non-invasive strategies but in their clinical practices, they prefer conventional surgical model to manage the disease. In fact, surgical model treats only the symptom of caries that is a cavity. Caries as a disease still persists in sufferer's mouth until and unless treated with medical model of caries management. Employing the non-invasive strategies emphasized in the medical model, thousands of teeth may be saved from iatrogenic destruction caused by the unnecessary use of dentists' drill. It is therefore recommended that concerned subject teachers should analyze their respective cariology courses and make appropriate alterations. They should focus on producing future dental clinicians with clinical competency to manage caries with current knowledge about caries management. To execute this, customary training style, prescribed psychomotor skills and expected competencies of dental graduates which stress on interventional, clinical and biological aspects must be altered. They should be expanded by adding new skills capable of sustaining actions focused on promoting health and based on the comprehensiveness of health care. The training should be directed towards improving diagnostic skills and treating and preventing caries, keeping in view the complexity of the microbiological and biological environment.

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