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An illuminated periodontal curette using wireless technologies for accurate perioscopy

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BRIEF DESCRIPTION

The invention is an illuminated periodontal curette that offers an accurate and magnified visualization during complex dental procedures. The modified curette provides the operator with better real time insight and information regarding the tooth and root anatomy for accurate evaluation as well as procedure planning and therapy.

FULL DESCRIPTION

Dental procedures, such as scaling and root planning, requires precise yet complex operations that depends upon knowledge about the particular tooth being treated. Unfortunately, the most popular technique currently being used is the tactile feedback which offers no information considering the root microanatomy, the appropriate end point for non-surgical periodontal therapy or even prophylactic procedures. Visual inspection of the tooth root and pocket is a preferred means of diagnostic, yet not currently practical due to the lack of precise and handy equipment.

Inventors at UCI created a compact illuminated curette that provides the ability to visualize precisely the tooth microanatomy on a real-time basis. Through the means of an illuminating source and a miniature camera, both encapsulated in a modified compact curette, clear view of the tooth root surface as well as the interior pocket are made available. Such knowledge improves the evaluation accuracy of the diagnostic process as well as the efficiency of various surgical and non-surgical periodontal procedures.

SUGGESTED USES

- Dental Procedures:
 - o Evaluating tooth and root anatomy
 - o Root planning procedures
 - o Diagnosis of tooth health, pathology and treatment planning
 - o Evaluation of restorative interventions

ADVANTAGES

- Obtain visualization of tooth root surface and pocket interior using an illumination source and miniature camera
- Assist in diagnosis of root pathologies or anomalies
- Assessing the patient’s need for non-surgical versus surgical periodontal therapy
- Clear determination of root anatomy
- Determination of an end point of therapy

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	20190328221	10/31/2019	2018-077

STATE OF DEVELOPMENT

Conceptual stage

UCI Beall
Applied Innovation

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