GUIDELINES FOR

PERIODONTICS

Version 1

Health Policies and Standards Department

Health Regulation Sector (2021)

INTRODUCTION

Dubai Health Authority (DHA) is the responsible entity for regulating, licensing and monitoring health facilities and healthcare professionals in the Emirate of Dubai. The Health Regulation Sector (HRS) is an integral part of DHA and was founded to fulfil the following overarching strategic objectives and program:

Objective #1: Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high quality service delivery system.

Objective #2: Direct resources to ensure healthy and safe environment for Dubai population.

Strategic Program #5: Oral & Dental Care: This program focuses on improving the oral health outcomes and ensure that all individuals have access to high quality treatments and effective prevention programs for dental care.

ACKNOWLEDGMENT

This document was developed by Dental Services Department, Primary Healthcare Services Sector (PHCSS). It has further been reviewed by the Health Policy and Standards Department (HPSD), HRS.

HRS would like to acknowledge and thank all parties that participated and worked toward developing these guidelines to ensure improving the quality and safety of healthcare services.

The Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

Clinical guidelines are increasingly becoming part of current practice and will become more common over the next decade. These Clinical Guidelines aim to improve the quality and the level of healthcare provided to the clients. Healthcare providers can use these guidelines to answer specific questions in day-to-day practice and as an information source for continuing professional education.

This guideline presents a framework to standardize the assessment and reassessment process for all the patients seeking periodontal treatment. It also assist Periodontists in the following:

- To answer specific questions in day-to-day practice related to the management of endodontic periodontal clinical conditions involving pathologic communications between the pulp and periodontal tissues that can occur in healthy or diseased periodontium.
- To adhere to a series of critical steps. These steps encompass the following: early diagnosis, formulating a comprehensive plan of treatment, followed by the sustained periodontal maintenance and monitoring also known as Supportive Periodontal Therapy (SPT).

DEFINITIONS

- **Endodontic Periodontal Lesions:** are clinical conditions involving pathologic communications between the pulp and periodontal tissues.
- **Hereditary Gingival Fibromatosis (HGF):** is a rare disorder characterized by a benign, non-haemorrhagic, fibrous gingival overgrowth that can appear in isolation or as part of a syndrome.
- **Periodontal Diseases:** are a group of illnesses affecting the gingival tissues and dental supporting structures.

ABBREVIATIONS

AAP	:	American Academy of Periodontology
BOP	:	Bleeding on Probing
CAL	:	Clinical Attachment Loss/level
DHA	:	Dubai Health Authority
EBA	:	Ethoxy Benzoic Acid
EFP	:	European Federation of Periodontology
EPL	:	Endodontic Periodontal Lesion
GIC	:	Glass Ionomer Cement
HFG	:	Hereditary Gingival Fibromatosis
HPSD	:	Health Policy and Standards Department
HRS	:	Health Regulation Sector
MTA	:	Mineral Trioxide Aggregate
NUG	:	Necrotizing Ulcerative Gingivitis
OHI	:	Oral Hygiene Instructions
PD	:	Probing depth
PM	:	Preventive Maintenance
PHCSS	:	Primary Healthcare Services Sector
SPT	:	Supportive Periodontal Therapy

A. GUIDELINES FOR PERIODONTIC AND ENDODONTIC CONSIDERATIONS

1. BACKGROUND

Endodontic periodontal lesions (EPLs) are clinical conditions involving pathologic communications between the pulp and periodontal tissues that can occur in healthy or diseased periodontium. These lesions are initiated by caries or dental trauma concerning the dental pulp which subsequently extends to the periodontium. Clinical signs and symptoms include; deep periodontal pockets, altered response to sensitivity testing, tenderness to percussion or palpation, radiographic evidence of bone loss especially at the tooth apex or furcation area, tooth mobility, sinus tract with the possibility of purulent exudate and crown or gingival discoloration. Proper management depends on adequate clinical and radiographic examination with accurate classification of the type of EPL, keeping in mind the overall prognosis and periodontal condition of the tooth.

2. SCOPE

2.1. To distinguish between different types of periodontic/endodontic lesions highlighting the essential diagnostic steps required to reach a proper treatment plan to eradicate these lesions and maintain the affected teeth.

3. PURPOSE

3.1. To identify the different types of periodontic/endodontic lesions.

3.2. To provide clear steps into managing these lesions, therefore improving the overall prognosis of affected teeth and reducing the incidence of tooth loss.

3.3. To highlight the different roles of the periodontist and endodontist in clinical management of such cases and provide a clear pathway for proper referral.

4. APPLICABILITY

4.1. DHA Licensed General Dentists.

4.2. DHA Licensed Periodontists.

4.3. DHA Licensed Endodontists.

5. RECOMMENDATION ONE: DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS

5.1. Diagnosis of periodontic/endodontic lesions is reached after thorough clinical and radiographic examination which involves assessing the following:

5.2. Patient history and chief complaint

5.2.1. Detailed history of the site in question is carried out which includes: presence and localization of pain, whether the pain is aggravated by biting on hard food or consuming cold liquids, presence bitter taste that might be caused by bleeding or suppuration from the site, occurrence of a recent dental trauma or root canal treatment of the concerned site, History of periodontal treatment or post preparation.

5.2.2. Further investigations are carried out thereafter to check for the presence of perforations, tooth cracks, root fractures or external root resorption.

5.3. Extraoral examination

5.3.1. Investigate about the presence of fever, malaise, facial swelling or lymphadenopathy.

5.4. Full mouth periodontal assessment

5.4.1. Which includes: probing depth, clinical attachment level, presence of bleeding on probing or suppuration, percussion and mobility testing.

5.5. Pulp sensibility testing

5.5.1. Done using thermal or electric pulp tests, a negative or altered response indicates the presence of EPL.

5.6. Integrity of dental restorations and dental crowns/bridges

5.6.1. Examine all fillings and dental crowns present for signs of secondary caries, leakage or discoloration.

5.7. Occlusal assessment

5.7.1. Asses if there is any traumatic occlusal contacts of the tooth in question.

5.8. Radiographic examination

5.8.1. A periapical radiograph is taken and examined properly for the presence of apical or furcal bone loss, deep caries or restorations, root fractures or perforations and root resorption.

5.9. The presence of deep periodontal pockets reaching to or close to the apex in combination with a negative response to pulp testing are the two primary clinical features that will aid the clinician to early detection of an EPL.

Note: for the systematic diagnostic approach of endodontic/periodontal lesions based on the new classification refer to **Appendix 1.**

5.10. The most common classification of endodontic/periodontal lesions is based on the 1972 classification by Simon et al. which classifies the lesions based on the main source of infection into primary endodontic lesions, primary periodontal lesions, primary endodontic lesions with secondary periodontal involvement, primary

periodontal lesion with secondary endodontic involvement and true combined lesions.

5.11. A new classification system was introduced following the 2018 AAP/EFP world workshop **Appendix 2** to overcome the confusion caused by the previous classification, as it was hard to determine the primary source of infection especially that complete history was not always available to the clinical to identify the primary source of the disease. Furthermore, source of the disease was irrelevant to both treatment and prognosis. This new classification was based on the current disease presentation and it was easily related to the overall prognosis of the tooth which helps into formulating a comprehensive treatment plan.

1. **RECOMMENDATION TWO:** CLINICAL STEPS IN MANAGEMENT OF PERIODONTIC/ENDODONTIC LESIONS

5.12. Endo-periodontal lesions with root damage

5.12.1. An attempt is made to salvage the tooth by sealing root perforation with a suitable material e.g. Mineral Trioxide Aggregate (MTA), Super Ethoxy Benzoic Acid (EBA), Glass Ionomer Cement (GIC), Vitremer. Root fractures can be managed with root resection or hemi-section.

5.12.2. Those teeth carry a very poor prognosis as most of the tooth structure is affected. Therefore, it is fair to consider if extraction and subsequent replacement of the tooth would be more beneficial to the patient.

5.13. 4.2 Endo-periodontal lesions without root damage

5.13.1. Caused by endodontic or periodontal infections with a prognosis varying from favourable to hopeless, poorer prognosis is associated with teeth caused by periodontal infection as it is difficult to convert the oral microbiology back to normal especially in patients with severe periodontitis and deep periodontal pockets.

5.13.2. Therefore, a comprehensive treatment plan is essential in management of EPL and that includes the following steps:

a. Eliminate occlusal trauma to avoid worsening the condition of the inflamed periodontium.

b. Splint the affected teeth in case elimination of traumatic occlusal forces could not be carried out or if the teeth were mobile.

c. In teeth with infected or necrotic pulps, non-surgical root canal therapy is carried out first. Teeth are re-examined after 3 months, if the lesions still persist then a periodontal treatment is initiated.

d. In teeth with normal response to sensibility testing, a thorough periodontal treatment is initiated. That includes pocket debridement and drainage, pocket irrigation, local antimicrobials administration and incision and drainage of localized abscesses.

e. Non-surgical treatment modalities are started initially and the healing response is evaluated before considering a surgical approach to treatment. Teeth are evaluated after 2-3 for signs of periapical resolution and managed according to **Appendix 3.**

6. **RECOMMENDATION THREE:** CONCLUSION

6.1. Resorption presents with a range of aetiologies and prognoses. A thorough understanding of the pathology is essential to allow appropriate treatment planning.

6.2. Timely intervention is essential for optimum management. Practitioners must be aware of when to intervene and have the confidence to do so. Delays in treatment via late diagnoses and referral waiting times may be catastrophic. The outcome for treatment may be uncertain and patients should always be well informed of this.

7. **RECOMMENDATION FOUR:** RECOMMENDATIONS

7.1. This guideline aims to provide a map that would be easy for clinicians to follow in daily practices to guide them through early detection and proper management of EPL. Appropriate case selection and informing the patient of all aspects of treatment plan, maintenance and prevention are key factors in the success of treatment.

7.2. Proper management of EPLs depends on elimination of risk factors and accurate classification, which carves the pathway to the most efficient treatment approach. Failure of resolution may be caused by failure to remove the source of infection, inaccurate diagnosis, incomplete debridement of lesions, failure to choose the proper treatment modality that would suit the overall prognosis and functional demands of the tooth or presence of an underlying systematic condition.

B. GUIDELINES FOR MANAGEMENT OF PATIENTS ON SUPPORTIVE PERIODONTAL THERAPY

2. BACKGROUND

The primal key in the delivery of effective periodontal treatment to patients is to adhere to a series of critical steps. These steps encompass the following: early diagnosis, formulating a comprehensive plan of treatment, followed by the sustained periodontal maintenance and monitoring also known as Supportive Periodontal Therapy (SPT). SPT is best performed via adhering to a standard treatment protocol, tailoring the therapy needs based on the patients' specific diagnostic standpoint. This will be followed by a recurrent re-assessment and monitoring of the patients' condition. This is done to ensure of the reduction of the periodontally pathogenic bacteria, and thereby reduce the rise of inflammation, reducing the incidence of tooth loss (tooth loss in periodontal patients has been shown to be inversely proportional to the frequency of periodontal maintenance sessions) and recurrence of disease. Patients' outcomes with time.

3. SCOPE

3.1. The reduction of advancement of periodontal disease, as well as prevent the disease recurrence after receiving gingivitis/periodontal therapy.

3.2. To decrease the occurrence of tooth loss via periodically monitoring the patient's pre-existing dentition and prostheses.

3.3. To formulate more accurate early patient diagnosis, and providing the necessary therapy in a in a timely manner on the basis of the patients' periodontal standpoint and disease progression.

4. PURPOSE

4.1. Implement a thorough systematic diagnostic sequence, and formulating goal/diagnosis-directed treatment plan extracted from the patient's medical and dental histories, periodontal exams, and radiographs, in patients who were previously treated for periodontitis, peri-implantitis, or some types of gingivitis (drug influenced, gingival diseases modified by systemic factors, hereditary gingival fibromatosis, etc.)

5. APPLICABILITY

5.1. DHA licensed general dental practitioners

5.2. DHA licensed periodontists

6. RECOMMENDATION ONE: DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS

6.1. Following a thorough medical/dental history, the diagnosis of periodontal patient necessitates the assessment of the following clinical parameters **Appendix 4.**

6.1.1. Probing Depth (PD)

6.1.2. Bleeding On Probing (BOP)

6.1.3. Clinical Attachment Loss/Level (CAL)

6.1.4. Degree of furcation involvement

6.1.5. Extent of gingival

6.1.6. Recession

6.1.7. Tooth mobility

6.1.8. Plaque score

7. **RECOMMENDATION TWO:** CLINICAL STEPS IN MANAGEMENT OF PATIENTS ON SUPPORTIVE PERIODONTAL THERAPY

7.1. To address the standpoint of SPT, the following are steps to the Phases of Therapy to manage a periodontally involved patient.

7.2. Catering to Emergency Needs e.g. Necrotizing Ulcerative Gingivitis (NUG), gingival abscess etc.

7.3. Systemic Phase: Therapy including smoking cessation counselling.

7.4. Initial Therapy: aims at controlling the microbial plaque and to identify and deal with any modifiable risk factors

7.4.1. Strategic Extractions

7.4.2. Removal of identifiable risk factors

7.4.3. Oral hygiene instructions + reinforcement

7.4.4. Occlusal adjustment for over-erupted teeth

7.4.5. Supra and sub gingival scaling

7.4.6. Local/Systemic antibiotics

7.4.7. Chlorhexidine mouthwash

7.4.8. Restorative needs

7.4.9. Night guard (in case of tooth migration/evidence of bruxism).

7.5. Corrective Therapy: includes surgical and non-surgical therapy to treat residual active pockets.

7.5.1. Pocket depth reduction.

7.5.2. Gain access to root surfaces.

7.5.3. Removal of retractable or hyperplastic gingiva.

7.5.4. Root resection/ tooth hemi section.

7.5.5. Periodontal regeneration.

7.6. SPT: aims to prevent the recurrence of disease and maintenance of periodontal health.

7.6.1. Evaluation of the response to treatment

7.6.2. Periodontal probing and comparison to previous charts

7.6.3. Review appearance of the gingiva

7.6.4. Check Oral Hygiene

7.6.5. Instruction and motivation in personal plaque control

7.6.6. Removal of supra/sub gingival plaque and calculus

7.6.7. Review of risk factors

7.6.8. Decide if perio surgery/further surgery is required

7.7. Frequency of SPT: As emphasized in **Appendix 5**, SPT is tailored specifically tailored to the patient's individual diagnostic standpoint. In the case of pure gingivitis SPT is performed semi-annually. However, for periodontitis patients with attachment loss, SPT is performed at least four times per year. This is on the basis that periodontal pathogens tend to return to baseline levels 9 to 11 weeks after pocket debridement suggest that Preventive Maintenance (PM) should be per-formed at intervals of less than 6 months. Intervals range from 2 weeks, 2-3 months, 3 months, 3-4 months, 4-6 months, up to 18 months.

8. **RECOMMENDATION THREE:** CONCLUSION

8.1. Resorption presents with a range of aetiologies and prognoses. A thorough understanding of the pathology is essential to allow appropriate treatment planning.

8.2. Timely intervention is essential for optimum management. Practitioners must be aware of when to intervene and have the confidence to do so. Delays in treatment via late diagnoses and referral waiting times may be catastrophic. The outcome for treatment may be uncertain and patients should always be well informed of this.

9. **RECOMMENDATION FOUR:** RECOMMENDATIONS

9.1. This guideline is to lead the treating dentists to the right direction, and is considered merely as a reference for guidance. Deviations from this guideline are considered to be not in conflict with proper way of diagnosis and treatment as long as it's following the evidence-based science and references of repute.

9.2. The desired outcome for patients on SPT should result in preservation of the periodontal health

9.3. The role of patient compliance and adherence to his/her tailored SPT visits are crucial. Therefore, effective communication of the disease's etiological factors, the realistic benefits of the treatment, and the drawbacks of no treatment, must be addressed to the patient with utmost transparency. Organized patient scheduling, along with precise documentation and reporting will positively promote the management of periodontal patients.

9.4. Compliant patients who still continue to demonstrate signs of disease progression, or recurrence, additional treatment might be required.

KEY PERFORMANCE INDICATORS (KPIs)

1. Patient Happiness: Overall Assessment	
DHA Pillar	Patient Happiness
Indicator Name	Overall Assessment
Measure Type	Outcome
Data Source	Survey data
Measure Description	People who had a very favorable overall assessment of the facility during measurement period
Measure Denominator	All survey respondents who meet inclusion criteria
Measure Numerator	Survey respondent whose overall assessment of the facility was very high - patients with the highest possible score (scale has 2-7 options) or the two highest options (scale has 8+ options)
Measure Inclusion Criteria	Total number of valid responses to surveys that ask a patient to give their overall assessment of a facility
Measure Exclusion Criteria	None
Source	DHA
International Benchmark	None: Dubai facility surveys are not sufficiently uniform to allow benchmarking
Higher is Better	Yes
Risk Adjust This Measure	No

2. Patient Happiness: Recommendation to Others	
DHA Pillar	Patient Happiness
Indicator Name	Recommendation to Others
Measure Type	Outcome
Data Source	Survey data
Measure Description	Percentage of patients who were very likely to recommend the facility to other people during measurement period
Measure Denominator	All survey respondents who meet inclusion criteria
Measure Numerator	Survey respondent whose recommendation was very high - patients with the highest possible score (scale has 2-7 options) or the two highest options (scale has 8+ options)
Measure Inclusion Criteria	Total number of valid responses to surveys that ask whether the patient would recommend the facility to others
Measure Exclusion Criteria	None
Source	DHA
International Benchmark	None: Dubai facility surveys are not sufficiently uniform to allow benchmarking
Higher is Better	Yes
Risk Adjust This Measure	No

3. Patient Happiness: Doctors Made Sure Patient Understood All Information	
DHA Pillar	Patient Happiness
Indicator Name	Doctors Made Sure Patient Understood All Information
Measure Type	Outcome
Data Source	Survey data
Measure Description	Percentage of patients who answered favorably ('yes') that doctors made sure he/she understood all information
Measure Denominator	All survey respondents who met inclusion criteria
Measure Numerator	Survey respondent indicated 'yes,' doctors made sure that the patient understood all information
Measure Inclusion Criteria	Valid response to the survey question ('yes' or 'no')
Measure Exclusion Criteria	None
Source	DHA
International Benchmark	None: Dubai facility surveys are not sufficiently uniform to allow benchmarking
Higher is Better	Yes
Risk Adjust This Measure	No

4. Patient Safety: Rate of Medication Error	
DHA Pillar	Patient Safety
Indicator Name	Rate of Medication Error
Measure Type	Outcome
Data Source	Internal facility records, reports, or survey data
Measure Description	Rate of prescriptions per 100,000 with a dispensing error during measurement period
Measure Denominator	Number of medication prescriptions during measurement period
Measure Numerator	Number of prescriptions in which a medication error occurs (e.g. dispensing error, prescribing error, administering and preparing error, patient compliance error, vaccine error, administering a medicine for a known allergy patient, dose-related adverse drug reaction)
Measure Inclusion Criteria	All filled prescriptions
Measure Exclusion Criteria	Unsafe condition and near miss incident, adverse drug reactions
Source	TEC required measures http://apps.who.int/iris/bitstream/10665/252274/1/9789241511643-eng.pdf
International Benchmark	2.28 Per 100,000 (in the U.S.) Source: https://www.nationwidechildrens.org/newsroom/news-releases/2017/07/study-finds-rate-of-medication-errors-resulting-in-serious-medical-outcomes-rising . One medication error occurs for every five doses given in US hospitals and 1-2% of patients admitted to US hospitals are harmed by medication errors. Source: http://stateclaims.ie/wp-content/uploads/2017/11/Medication-Incidents-Report-2016.pdf
Higher is Better	No
Risk Adjust This Measure	No

5. Patient Safety: Rate of Medical Error	
DHA Pillar	Patient Safety
Indicator Name	Rate of Medical Error
Measure Type	Outcome
Data Source	Internal facility records, reports, or survey data
Measure Description	Rate of medical errors (errors in diagnosis, medication, surgery, equipment use, lab findings interpretation) per 100,000 patients in measurement period
Measure Denominator	All qualifying patients in measurement period
Measure Numerator	Medical errors as defined through proven reports (e-medical systems) during measurement period
Measure Inclusion Criteria	All patients with at least one medical encounter in measurement year
Measure Exclusion Criteria	None
Source	TEC required measures http://apps.who.int/iris/bitstream/10665/252274/1/9789241511643-eng.pdf
International Benchmark	To be discussed with DHA
Higher is Better	No
Risk Adjust This Measure	No

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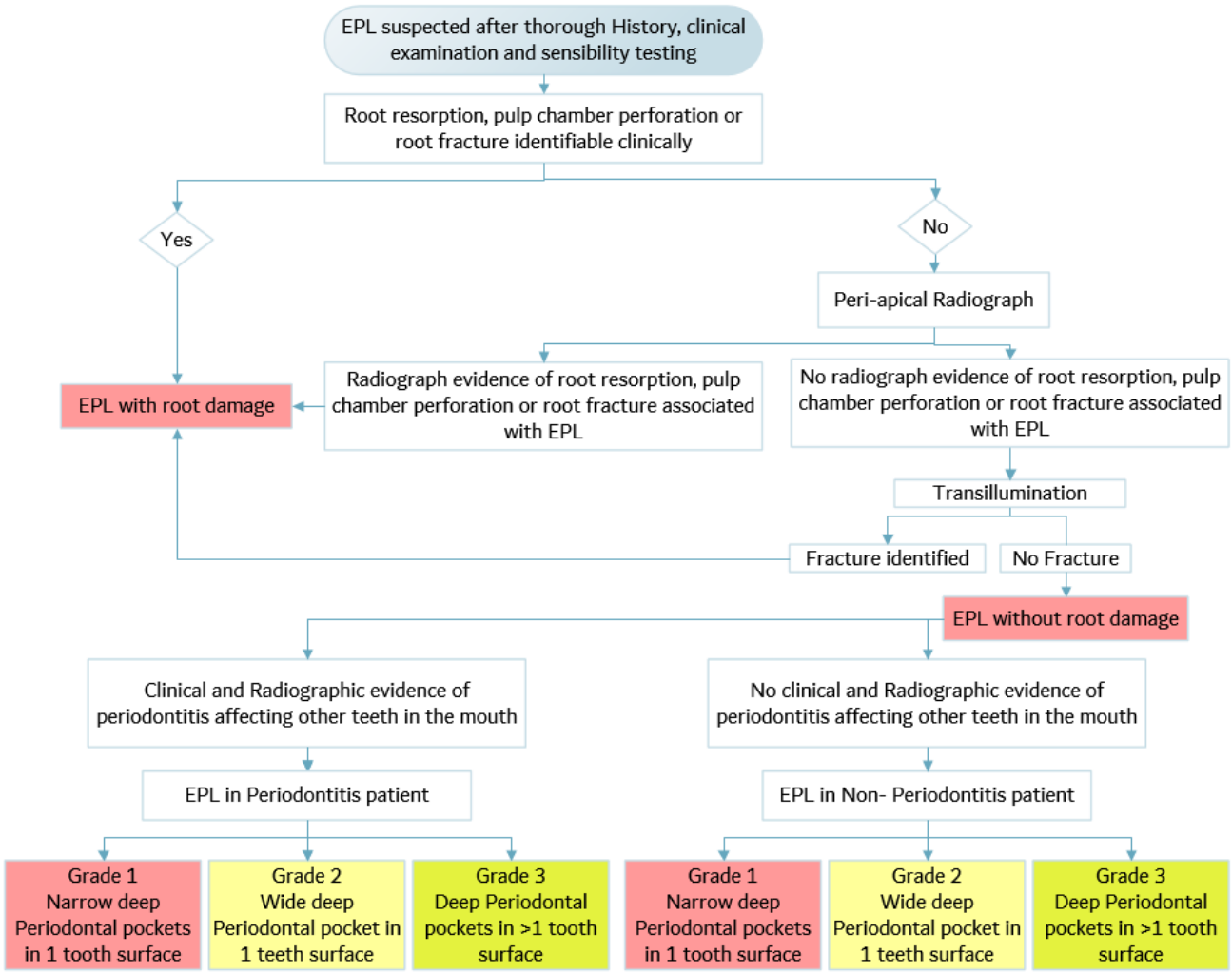
APPENDICES

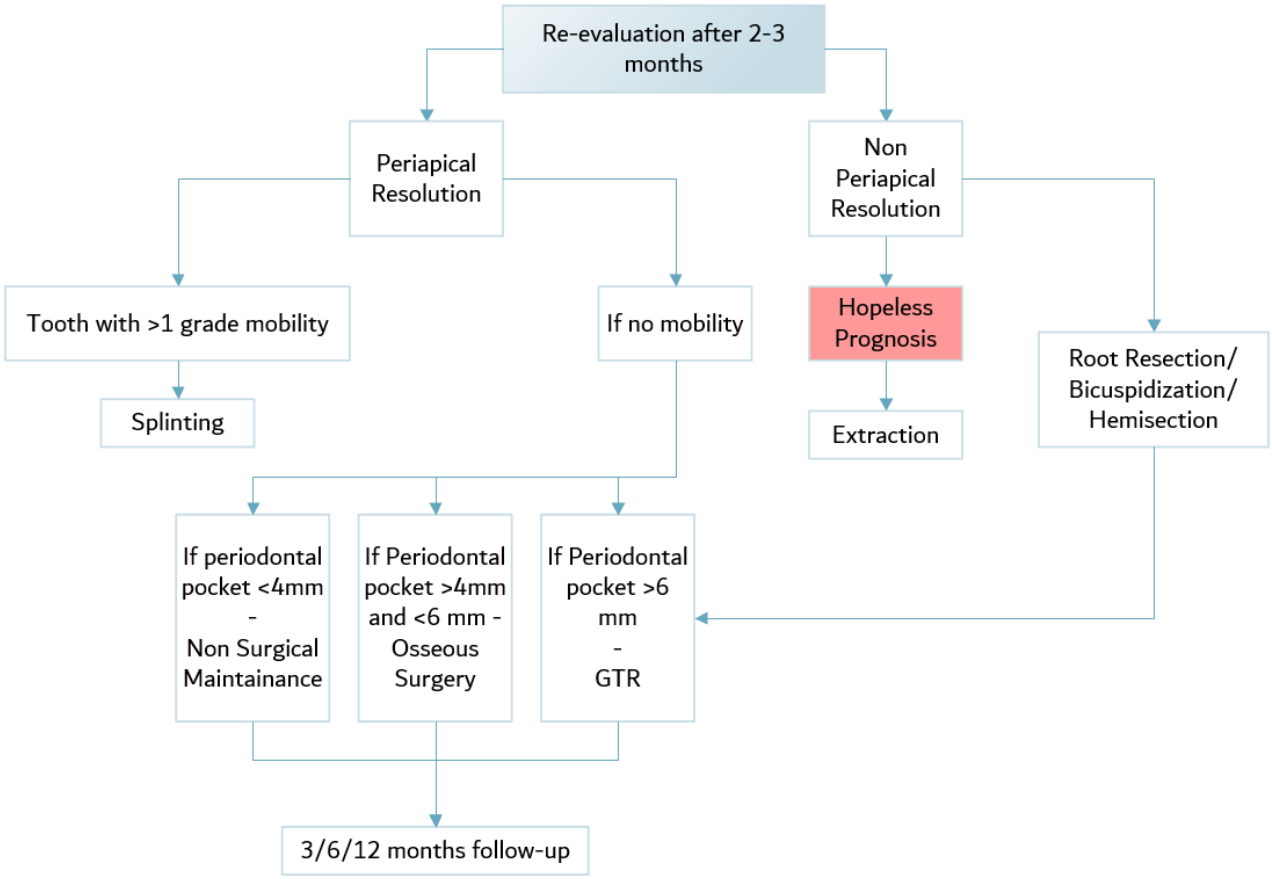
APPENDIX 1: SYSTEMATIC DIAGNOSTIC APPROACH OF ENDODONTIC/PERIODONTAL LESIONS BASED ON THE NEW CLASSIFICATION



APPENDIX 2: NEW CLASSIFICATION FOR ENDO-PERIODONTAL LESIONS BASED ON THE 2018 AAP/EFP WORLD WORKSHOP

Endo-Periodontal lesion with root damage	**Endo-Periodontal lesion without root damage**	
• Root fracture or cracking • Root canal or pulp chamber perforation • External root resorption	Endo periodontal lesion in periodontitis patients	Endo periodontal lesion in non-periodontitis patients
	• Grade 1: narrow deep periodontal pocket in 1 tooth surface. • Grade 2: wide deep periodontal pocket in 1 tooth surface. • Grade 3: Deep periodontal pockets in more than 1 tooth surface.	• Grade 1: narrow deep periodontal pocket in 1 tooth surface. • Grade 2: wide deep periodontal pocket in 1 tooth surface. • Grade 3: Deep periodontal pockets in more than 1 tooth surface.

APPENDIX 3: SURGICAL TREATMENT MODALITIES OF TEETH WITH EPL



APPENDIX 4: MODIFIED VERSION OF THE AMERICAN ACADEMY OF PERIODONTOLOGY SUGGESTED GUIDELINES FOR A COMPREHENSIVE PERIODONTAL EXAMINATION.

Assessment of Medical History
Assessment of Dental History
Assessment of Periodontal Risk Factors 1. Age 2. Gender 3. Medication 4. Presence of plaque and calculus (quantity and distribution) 5. Smoking 6. Race/Ethnicity 7. Systemic Disease (e.g. Diabetes) 8. Oral Hygiene 9. Socioeconomic
Assessment of extraoral and intraoral structures and tissues
Assessment of Teeth 1. Mobility 2. Caries 3. Furcation Involvement 4. Position in Dental Arch and within Alveolus 5. Occlusal Relationship 6. Evidence of Trauma from Occlusion
Assessment of Periodontal Soft Tissues including Peri-implant tissues 1. Colour 2. Contour 3. Consistency (fibrotic or oedematous) 4. Presence of Purulence (suppuration) 5. Amount of Keratinized and attached tissue gingiva 6. Probing Depths 7. Bleeding on Probing 8. Clinical attachment Levels 9. Presence and Severity of gingival recession

Radiographic evaluation of alveolar bone loss, bone density, furcation, root shape and proximity etc.

APPENDIX 5: PERIODONTAL DIAGNOSTIC GUIDELINES

Case Indicator	Healthy	Gingivitis	Slight Periodontitis	Moderate Periodontitis	Advanced Periodontitis	Aggressive/Refractory
Pocket Depth[a]	$\leq$ 3 mm	$\leq$ 4 mm	4 - 5 mm	5 -6 mm	$\geq$ 6mm	$\geq$ 6mm
Bleeding Upon Probing	No	Yes[b]	Yes[b]	Yes[b]	Yes[b]	Yes[b]
Six-Point Probing	Yes	Yes	Yes	Yes	Yes	Yes
Bone Loss	None	None	$\leq$ 10%	$\leq$ 33%	$\geq$ 33%	$\geq$ 33%
Tooth Mobility[c]	None	None	None	$\leq$ Grade II	$\leq$ Grade III	$\leq$ Grade III
Furcation[d]	None	None	$\leq$ Grade I	$\leq$ Grade II	$\leq$ Grade III/IV	$\leq$ Grade III/IV
Clinical Attachment Loss (CAL)[e]	None	None	1 - 2 mm CAL	3 - 4 mm CAL	$\geq$ 5 mm CAL	$\geq$ 5 mm CAL
Other	No inflammation	Only gingival tissues affected by the inflammatory process · No alveolar bone loss · Localized or generalized	Signs of inflammation may be present, including · Edema · Redness · Suppuration · Alveolar bone level is 3 - 4 mm from CEJ · Radiographic bone loss present · Localized or generalized	Signs of inflammation may be present, including · Edema · Redness · Suppuration · Alveolar bone level is 4 - 6 mm from CEJ · Radiographic bone loss present · Localized or generalized	Signs of inflammation may be present, including · Edema · Redness Suppuration · Alveolar bone level is $\geq$ 6 mm from CEJ · Radiographic bone loss present · Localized or generalized	Signs of inflammation may be present, including · Edema · Redness · Suppuration · Same clinical signs as advanced but includes adolescents or young adults · Localized or generalized · Rapid cycles of disease progression
Assessment	· Prophy · OHI	· Prophy · OHI	· Comp. Oral Eval D0150 · Comp. Perio Eval D0180 · Four bitewings D0274 · Eight bitewings D0277 · FMX D0210 · Panoramic Film D0330	· Comp. Oral Eval D0150 · Comp. Perio Eval D0180 · Four bitewings D0274 · Eight bitewings D0277 · FMX D0210 · Panoramic Film D0330 · Full Mouth Debride D4355 · Occlusal Analysis D9950	· Comp. Oral Eval D0150 · Comp. Perio Eval D0180 · Four bitewings D0274 · Eight bitewings D0277 · FMX D0210 · Panoramic Film D0330 · Full Mouth Debride D4355 · Occlusal Analysis D9950 · Specialty Referral	· Comp. Oral Eval D0150 · Comp. Perio Eval D0180 · Four bitewings D0274 · Eight bitewings D0277 · FMX D0210 · Panoramic Film D0330 · Full Mouth Debride D4355 · Occlusal Analysis D9950 · Specialty Referral
Active Therapy	· Prophy · OHI	· Prophy · OHI	· Quadrant SRP D4341 - UR, UL, LR, LL · Localized SRP D4342 - UR, UL, LR, LL · Locally Administered Antimicrobials D4381 · OHI D1330 · Specialty Referral · Other Treatments	· Quadrant SRP D4341 - UR, UL, LR, LL · Localized SRP D4342 - UR, UL, LR, LL · Locally Administered Antimicrobials D4381 · OHI D1330 · Specialty Referral · Other Treatments	· Quadrant SRP D4341 - UR, UL, LR, LL · Localized SRP D4342 - UR, UL, LR, LL · Locally Administered Antimicrobials D4381 · OHI D1330 · Specialty Referral · Other Treatments	· Specialty Referral
Ongoing Maintenance	6 Months · Prophy · OHI	6 Months · Prophy · OHI	· Perio Maintenance D4910 - 3/4/6 months · OHI D1330 · Locally Administered Antimicrobials D4381 · Localized SRP D4342 - UR, UL, LR, LL · Other Treatments	· Perio Maintenance D4910 - 3/4/6 months · OHI D1330 · Locally Administered Antimicrobials D4381 · Localized SRP D4342 - UR, UL, LR, LL · Other Treatments	· Perio Maintenance D4910 - 3/4/6 months · OHI D1330 · Locally Administered Antimicrobials D4381 · Localized SRP D4342 - UR, UL, LR, LL · Other Treatments	· Perio Maintenance D4910 - 3/4/6 months · OHI D1330 · Locally Administered Antimicrobials D4381 · Localized SRP D4342 - UR, UL, LR, LL · Host Modulation

[a] Excluding gingival overgrowth and recession

[b] Bleeding upon probing may not be present in individuals with periodontal disease who are smokers.

[c] **Tooth Mobility**: *Grade I:* Slightly more than normal; *Grade II:* Moderately more than normal; *Grade III:* Severe mobility faciolingually and mesiodistally, combined with vertical displacement. Adapted from Newman MG, Takei H, Klokkevold PR, Carranza FA. *Carranza's Clinical Periodontology* 10th ed. Philadelphia, PA: Elsevier; 2006.

[d] **Furcation Grades**: *Grade I:* Initial attachment loss with most of the bone still intact in the furcation. No radiographic changes seen; *Grade II:* The bone defect is definite horizontal bone loss that does not extend all the way through. Vertical bone loss may also be present. There is an opening into the furca with a bony wall at the deepest portion. *Grade III:* Bone is lost across the whole width of the furcation so no bone is attached to the furcation roof; *Grade IV:* Bone loss across the furcation, accompanied with gingival recession at the furcation, is clinically visible. Adapted from Newman MG, Takei H, Klokkevold PR, Carranza FA. *Carranza's Clinical Periodontology* 10th ed. Philadelphia, PA: Elsevier; 2006.

[e] Adapted from Armitage GC. Development of a classification system for periodontal diseases and conditions. Ann Periodontol 1999; 4(I):1-6

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