Clinical Update

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INTRODUCTION

Periodontal disease represents one of the two major diseases of the oral cavity. Although its reported prevalence in the literature varies according to study design, it is a common disease in adult populations. Given its high prevalence, diagnosis and treatment of periodontal disease forms an important part of patient care in a general practice setting.

Relatively few studies exist to report on the accuracy of periodontal diagnosis in general practice. Existing data however, show a changing environment for periodontics in general practice including changing patterns of referral, an increase in dental hygienist use, decreasing tobacco use and an increase in periodontal case severity.

Comprehensive and accurate diagnosis is essential prior to the treatment of periodontal disease as it can dictate whether treatment is performed in a general practice environment, what treatment options are provided, how prognosis is explained to a patient and what recall schedule may be appropriate.

This paper reports on a study conducted through the eviDent network of practices within Victoria. It aims to investigate what clinical parameters are assessed by clinicians when establishing a diagnosis of the periodontal tissues and the degree of accuracy that is achieved by such diagnoses.

MATERIALS AND METHODS

This study was designed as an online survey based on a similar survey by the Practitioners Engaged in Applied Research and Learning (PEARL) network in the USA. It was conducted through the eviDent network and was open to all general dentists who were members of the ADAVB. Specialist practitioners were not eligible. The survey was completed following a secure log-in through the ADAVB website, ensuring that responses were received only from the appropriate registered practitioners.

Practitioners were initially asked to provide demographic information including the type and location of practice, years in practice and the number of practitioners in their practice. They were also questioned regarding the location and extent of their training and whether a hygienist was employed in their practice. Dentists were then shown one of three clinical presentations, which was followed-up with a more detailed text-based scenario as outlined below:

- Clinical Presentation A – a new 45 year old patient with no periodontal attachment loss. This preceded the clinical scenarios:

1	-	Periodontal health
2	-	Gingivitis
3 and 4	-	Mild periodontitis

- Clinical Presentation B – a new 45 year old patient with a history of mandibular tooth loss due to looseness. This preceded the clinical scenarios:

| 5, 6 and 7 | - | Moderate periodontitis |
| 8 | - | Severe periodontitis |

- Clinical Presentation C – a long term patient treated for several years by the referring periodontist has returned to see them after a two year gap. This preceded the scenarios:

| 9 and 10 | - | Severe recurrent periodontitis |

The diagnoses stated in the above clinical scenarios were based on the American Academy of Periodontology (AAP) position paper guidelines.

Each participating dentist was shown five scenarios chosen at random (along with their associated clinical presentations). Dentists were asked what examinations they would usually perform in response to each case.

For each scenario, information was provided regarding the periodontal tissues including probing depths, bleeding on probing, clinical attachment loss, inflammation, furcation involvement and mobility. Based on the information provided, dentists were asked to provide a periodontal diagnosis. The diagnosis options included periodontal health, gingivitis, mild periodontitis, moderate periodontitis and severe periodontitis. An option was also provided whereby the patient could be referred to a periodontist for diagnosis. Dentists were asked which criteria they relied upon in reaching a diagnosis.

RESULTS

One hundred and thirty five dentists started the survey, of whom 106 went on to complete at least one clinical scenario. Approximately 2500 dentist were eligible to complete the survey so this represented a response rate of 5.4%. In total, there were between 36 and 53 responses for each clinical scenario.

After seeing a clinical presentation, dentists were asked which periodontal examinations they would usually perform in practice. For case presentation A, 87% of dentists said they would perform a periodontal examination. For cases B and C this was 95% and 93% respectively. Of those practitioners who stated that they would not perform a periodontal examination, many stated that they would be triggered to perform such an examination if other factors were present.

Probing depths and tooth mobility were the most common parameters that dentists stated they would record during their periodontal examination, regardless of the particular clinical presentation. These were closely followed by bleeding on probing (BOP), suppuration and furcation involvement. Recording the

presence of plaque and inflammation was more often stated for the health/gingivitis scenarios when compared with moderate/severe periodontitis scenarios. The location of the mucogingival junction was mentioned least.

When dentists were asked what criteria they would use to arrive at a periodontal diagnosis, a range of responses were given. Having pocket depths > 3 mm was the most commonly relied upon criterion for diagnosis of moderate and severe periodontitis. BOP was the criterion most relied upon for diagnosis in the health/gingivitis and mild periodontitis cases.

The diagnoses that dentists arrived at for each of the clinical scenarios are outlined in the table below:

Scenario	n	Health	Gingivitis	Mild Perio	Moderate Perio	Severe Perio	Refer for Diagnosis
1	48	39	5	2	1	0	1
2	44	5	25	11	2	0	1
3	47	1	9	27	9	1	0
4	36	2	5	21	7	0	1
5	46	1	0	19	23	1	2
6	44	0	0	0	13	18	13
7	51	1	0	0	6	33	11
8	48	0	0	0	4	32	12
9	42	0	1	16	20	3	2
10	53	2	0	6	28	10	7

As can be seen in the table, the majority of practitioners arrived at a diagnosis of periodontal health for scenario 1, which was the same diagnosis suggested by the AAP guidelines. There is a similar agreement for scenarios 2, 3, 4, 5 and 8. In scenarios 6 and 7 however, severe periodontitis was the most common diagnosis, which differed from the AAP guideline diagnosis of moderate periodontitis. Scenarios 9 and 10 represented cases of severe recurrent periodontitis but many dentists responded with a diagnosis of mild or moderate periodontitis.

The majority of dentists participating in the survey were in private general practices, either in solo practice (22.2%) or group practice

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Completion and return of this questionnaire with 9 correct answers will gain 1 scientific CPD hour towards satisfying Dental Board of Australia requirements. This is an ADAVB members only service. An administration fee of $11 (GST inclusive) applies. Circle the correct response on this form (or a photocopy) and return it with payment to: CPD Coordinator, ADAVB, PO Box 9015, South Yarra, Victoria 3141 - Submit by 30 October.

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Answers to last issue's Clinical Update (September 2016)
1 B, 2 D, 3 A, 4 FALSE, 5 C, 6 B, 7 A, 8 TRUE, 9 C, 10 D

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Questions

1. **Which of the following would have been eligible to complete this survey?**
   a. A final year dental student at La Trobe University
   b. A dental hygienist from a community clinic
   c. A general dentist from rural Victoria
   d. A specialist periodontist in a group practice.

2. **Which of the following information was NOT asked of practitioners in the study?**
   a. Number of years in practice
   b. Number of hours worked each week
   c. Number of practitioners in their practice
   d. Type and location of practice

3. **How many different clinical presentations were included in the survey design?**
   a. 3
   b. 5
   c. 8
   d. 10

4. **How many different clinical scenarios were included in the survey design?**
   a. 3
   b. 5
   c. 8
   d. 10

5. **Which of the following statements is true?**
   a. Of the 135 practitioners who started the survey, all completed at least one clinical scenario
   b. A total of 106 practitioners completed at least one scenario
   c. 106 practitioners each completed one clinical scenario only
   d. Each of the clinical scenarios was completed at least 45 times

6. **TRUE or FALSE?**
   For each of the clinical scenarios, practitioners were asked to state whether periodontal disease was localised or generalised in nature.

7. **The most common parameter used to arrive at a diagnosis of moderate or severe periodontitis was:**
   a. Tooth mobility
   b. Presence of plaque
   c. Probing depth > 3 mm
   d. Location of the mucogingival junction

8. **For clinical scenario 6, how many practitioners were able to arrive at a diagnosis without choosing the option to refer?**
   a. 13
   b. 18
   c. 31
   d. 44

9. **For scenarios 6 and 7 (AAP guidelines moderate periodontitis), which was the most commonly stated diagnosis:**
   a. Gingivitis
   b. Mild periodontitis
   c. Moderate periodontitis
   d. Severe periodontitis

10. **TRUE or FALSE**
    Probing depths and tooth mobility were the most common parameters that dentists stated they would record during their periodontal examination.