An Overviewon Clinical Risk Assessment In Periodontics

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ABSTRACT

Extensive study on oral ailments, particularly periodontal problems, has expanded our knowledge and awareness over the previous three decades. These studies have revealed that the host plays a critical role in the pathobiology of periodontitis and that the risk varies substantially from person to person. Periodontal disease prevention, diagnosis, and treatment all need risk assessment and application of the results. Risk assessment is a relatively new idea in dentistry. This essay will go over the many ideas of risk assessments in periodontics in great detail.

Keywords: Risk, Periodontal disease, Risk factors.

I.Introduction

Individuals were once thought to be equally susceptible to sickness. However, studies conducted in the 1990s clearly show that not all people are equally sensitive. Periodontal disease is a complex condition that begins with the formation of microbial dental plaque. 1 Risk assessments have the potential to be a strong new tool for increasing our ability for periodontitis prevention, treatment, and long-term care.

II. Terminologies

The process of making qualitative or quantitative assessments of the likelihood of adverse outcomes occurring as a result of exposure to specific health dangers or the lack of helpful factors is known as risk assessment.[1]

Risk is defined as the likelihood of an event occurring in the future, or the likelihood of an individual developing a disease or experiencing a change in health status over a period of time.[2]

III. Risk can be identified in terms of[1, 2, 3]

Risk factor, risk determinant, risk indicator, and risk estimator

IV. Hierarchy of evidence for risk factors [1]

Lines of Evidence	Quality and weight Rating	Human Study Designs
Consistency of agreement	High	Randomized controlled (intervention) trials
Strength of association	High	Prospective longitudinal cohort studies
Specificity of association	Moderate	Retrospective cohort studies
Appropriate time sequence	Moderate	Case control studies
Dose-effect response	Low	Cross sectional studies
Biological plausibility	Low	Case series
		Case Histories
		Anecdotes and clinical observations

V. Risk elements of periodontal disease

Risk factors

Although risk variables are biologically linked to disease occurrence, they do not always imply cause and effect. These are used to forecast whether patients are at risk for disease and to aid in disease diagnosis. Any environmental, behavioral, or physiological element that, when present, enhances the possibility of an individual developing the disease is referred to as a risk factor.[1] Tobacco use, diabetes, pathogenic bacteria, and microbial tooth deposits are among them..[1, 2, 3]

Risk determinants

Risk determinant/background characteristic, which is commonly used interchangeably with risk factor, should be used only for risk factors that cannot be changed. Non-modifiable risk factors are sometimes known as non-modifiable risk factors.[1]Tthese risk factors are inherent in nature, they cannot be changed. As a result, they are difficult to modify. Genetics, age, gender, financial level, and stress are among them.[1, 2, 3]

Risk indicators

Risk indicators are possible or speculative risk factors found in cross-sectional investigations but not confirmed in longitudinal illness studies.[1]To consider a risk signal as a risk factor, more longitudinal research is required. HIV/AIDS, osteoporosis, and infrequent dental checkups are all risk factors.[1, 2, 3]

Risk evaluator

Although risk predictors / indicators are linked to an elevated risk of disease, they do not cause it.[1] Bleeding on probing and a history of periodontal disease are two examples. [1, 2, 3]

VI. Clinical approaches for assessing risk in periodontics

The American Academy of Periodontology's guidelines for patient care suggest that risk assessment should be included in every full dental and periodontal examination.[4] In

situations where a clinical dental examination is not available, a different purpose of risk assessment is to identify individuals who are likely, or at least more likely than others, to have periodontitis. Furthermore, the periodontal risk assessment may assist clinicians in identifying patients with a poor periodontal prognosis and determining the effect of treatment on periodontal prognosis.[5]

VII. Stages of risk assessment in periodontics[4]

These steps are used to identify persons who are at risk of developing damaging periodontal diseases and to plan their treatment. The procedure is as follows: 1. Tissue clinical and radiographic assessment, as well as plaque biofilm-related difficulties 2. Systemic, genetic, medical, and social aspects are all taken into account. 3. Making a diagnosis based on these observations and devising a treatment plan; 4. Accurately recording initial (and later) results as part of carrying out the planned treatment; and 5. Comparing the outcome of such treatment to expectations and, if necessary, changing therapy.

VIII. Levels of risk assessment[5]

Risk assessment at the patient level, risk assessment at the mouth level, risk assessment at the site level, risk assessment at the tooth level.

IX. American academy of periodontology self-assessment tool[6]

The American Academy of Periodontology's web-based self-assessment tool can be used in conjunction with other resources to educate patients, create awareness, and aid in decision-making. It is utilized for both instructional purposes and population-based screening, with a focus on those who may not be under the regular care of a dentist. The tool's web interface consists of a 13-item questionnaire that asks simple questions that most people can easily answer.

Once we've submitted our responses, a patented calculation determines if we're at low, medium, or high risk, and generates a report detailing our findings. It also emphasises that the tool is not a replacement for a thorough examination and diagnosis by a competent practitioner. Rather, the purpose of this study is to inform patients about common periodontal disease risk factors and to assist in determining whether a referral to a periodontist is necessary.

X. Current methods to assess risk factors[7,8,9,10]

The oral health information suite is a collection of resources for anyone who want to learn more about (OHIS), 2. Calculator for Periodontal Risk (PRC), 3. Periodontal Risk Assessment Hexagonal Risk Diagram (PRA), Chandra created a periodontal risk assessment methodology. 5. Periodontal risk assessment using UniFe (Union of European Railway Industries). The AAP Risk Assessment Tool is a tool that can be used to assess the risk of a 7.Dentorisk, The Cronin/Stassen BEDS CHASM Scale and the Cronin/Stassen Genetic Test

XI. Clinical implications[11]

The purpose of risk management is to give clinicians the capacity to construct a risk-based care approach that considers both the severity of periodontal disease and the level of risk. It also emphasises the possibility of developing a precise treatment approach that addresses risk factors such as periodontal pocket width, bacteria, cigarette use, and diabetes control in order to reduce the risk.

XII. Conclusion

Risk assessment is an important element of periodontal therapy. In addition to the diagnosis, structural and geographic risk factors should be documented in the patient's case history. By focusing on early detection and prevention of dental illnesses, particularly periodontal disease, the art of risk assessment allows dental care practitioners to improve dental and medical quality in the general public as well as in specific populations.

References

1. Carranza's Clinical Periodontology 10th edition .

2. Clinical Periodontology & Implant Dentistry 6th edition - Niklaus P. Lang & Jan Lindhe

3. Global risk factors and risk indicators for periodontal diseases. Jasim M. Albandar. Periodontology 2000, Vol. 29, 2002, 177-206. Periodontal risk assessment, diagnosis & treatment planning. Bruce L. Pihlstrom. Periodontology 2000, Vol. 25, 2001, 37-58.

4. Risk assessment in clinical practice perio 2000 vol 34 2004 120- 135

5. Risk calculation and periodontal outcomes Periodontology 2000, Vol. 50, 2009, 65–77

6. American Academy of Periodontology statement on risk assessment. *Journal of Periodontology* 2008; 79: 202.

7. Recent Advances In Periodontal Risk Assessment Rhea Kiran.R, Seema

8. Lang NP, Tonetti MS. Periodontal risk assessment (PRA) for patients in supportive periodontal therapy (SPT). Oral Health Prev Dent. 2003;1:7-16

9. Chandra RV. Evaluation of a novel periodontal risk assessment model in patients presenting for dental care. Oral Health Prev Dent. 2007;5: 39-48

10. Elizabeth Koshi, S. Rajesh, Philip Koshi,and P. R. ArunimaRisk assessment for periodontal disease J Indian SocPeriodontol. 2012 JulSep; 16(3): 324–328

11. Papapanou PN: Risk assessments in the diagnosis and treatment of periodontal diseases. J Den Edu 1998; 62:822-839