



Prevalence of Aggressive Periodontitis in the population visiting outpatient department of a dental hospital of Jammu: A cross-sectional study

Dr. Prabhati Gupta,¹ Dr. Suhail Majid Jan²

¹(Department of Periodontology, Indira Gandhi Govt. Dental College, Jammu, India)

²(Department of Periodontology, Govt. Dental College, Srinagar, India)

ABSTRACT

Background: Aggressive periodontitis (AP) is a rapidly progressing disease that affects the otherwise healthy individuals. The aim of this study was to assess the prevalence of AP in the population visiting the outpatient Department of Periodontology, Indira Gandhi Govt. Dental College Jammu.

Materials and Methods: A total of 1600 patients were screened to estimate the prevalence of AP. Thorough gingival examination was done to evaluate the gingival condition. The periodontal status was evaluated by recording the clinical attachment level, probing pocket depth, and gingival recession. The radiographic assessment was done in the subjects provisionally diagnosed with AP which included full mouth intraoral periapical radiographs and panoramic radiographs.

Results: Out of 1600 patients, 14 were diagnosed with AP. Thus the prevalence of Aggressive periodontitis was found to be 0.87%.

Conclusion: The prevalence rate in the studied population was found to be 0.87%. The prevalence of AP is highly variable and controversial globally and needs a sincere and systemic approach to treat this.

Keywords: Aggressive periodontitis, periodontitis, prevalence.

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I. INTRODUCTION

Periodontitis is a multifactorial inflammatory disease which generally affects the connective tissue attachment and supporting bone present around the teeth. It is generally caused by interactions between periodontal microflora and host response [1]. The two common types of periodontitis are the chronic periodontitis and aggressive periodontitis. Aggressive periodontitis is a rapidly progressing disease that affects otherwise healthy individuals. The main characteristic of this disease is that it is episodic and the destruction of periodontal tissues is very rapid, resulting in early tooth loss [2]. Moreover, aggressive periodontitis is seen to be faster in progression than the chronic periodontitis, even in the presence of minute amount of microbial deposits.

Global prevalence of AP remains elusive [3]. Estimates of AP vary widely from 0 to 0.17%. The rate appears to be 0.1% in the developed nations and 5% in the underdeveloped nations [4]. Epidemiological surveys form the backbone to formulate therapeutic as well as preventive strategies to deal with the prevalent periodontal diseases in a given population. Such surveys in young individuals have been performed in many parts of the world and among individuals with a widely varied background.

Although attributed to methodological issues, diagnostic techniques, sample bias, and changing definition of what constitutes AP, the wide variation in the prevalence of AP is difficult to fathom and has been a fertile area of research. Thus this study was done to assess the prevalence of AP in the population visiting the outpatient Department of Periodontology, Indira Gandhi Govt. Dental College Jammu.

II. MATERIALS AND METHODS

The study was performed after obtaining ethical clearance from the institutional ethical committee. Informed written consent was obtained from the patients prior to the study. Aggressive periodontitis was diagnosed according to the 1999 American Academy of Periodontology classification into either LAP or generalized aggressive periodontitis (GAP) [5].

Clinically, LAP is characterized as having localized first molar/incisor presentation with interproximal attachment loss on at least two permanent teeth, one of which is a first molar, and involving no more than two teeth other than first molars and incisors. It has usually an age of onset at puberty. Radiographic findings may include an arc-shaped loss of the alveolar bone extending from the distal surface of the second premolar to the mesial surface of the second molar [5].

Clinically, GAP is characterized by generalized interproximal attachment loss affecting at least three permanent teeth other than first molars and incisors. It usually affects individuals under age 30, but older patients also may be affected. The radiographic picture in GAP can range from severe bone loss associated with the minimal number of teeth, as described previously, to advanced bone loss affecting the majority of teeth in the dentition [5].

The patients having uncontrolled systemic diseases, Overhanging restorations, Interproximal caries, Orthodontic appliances, Occlusal disharmony at the area of bone loss and pregnant and lactating mothers were excluded from the study.

A total number of 1600 subjects were screened to estimate the prevalence of AP in patients aged 15 to 60 years (mean age 30.5 ± 32.4 years), who visited the OPD of Periodontology department of the institute. Thorough gingival and periodontal examination was done to evaluate the gingival and periodontal status. The periodontal status was evaluated by assessment of the clinical attachment level, probing pocket depth, and gingival recession. The subjects provisionally diagnosed with AP were referred to the Department of Radiology for further examination. The radiographic assessment involved full mouth intraoral periapical radiographs and panoramic radiographs.

Prevalence of AP in patients was established by tabulating the results and dividing the final confirmed cases by the number of subjects screened and expressed as percentage.

III. RESULTS

A total number of 1600 systemically healthy subjects were screened and the distribution of various forms of periodontal diseases gender wise is depicted in Table 1. A total number of fourteen cases were finally confirmed to have either LAP or GAP giving a prevalence percentage of 0.87%. Among the fourteen cases of AP, eight were females and six were males.

Table 1 : Prevalence of AP with gender distribution

Type of AP	Male	Female
LAP	2	3
GAP	4	5
Total	6	8

IV. DISCUSSION

A cross-sectional study was undertaken to determine the prevalence of AP in patients visiting the OPD of Department of Periodontology, Indira Gandhi Govt. Dental College Jammu, India. This study consisted of 1600 patients, including 756 males and 844 females. Fourteen out of 1600 patients were diagnosed with AP in either localized or generalized form. The generalized form was more common than the localized form. In the present study, attachment loss was considered as the key parameter for the diagnosis of cases along with definite radiographic evidence of bone loss.

The present study showed a prevalence of 0.87% AP. Several studies have been conducted to find out prevalence of AP. A few of them are by Rao and Tewani [6], India 6.80%; Albandar et al [7], 28.8%; Imran and Ataa [8], Yemen 2.6%. On the contrary, various authors have reported a very modest prevalence of AP as follows: Kronauer et al [9], Switzerland 0.9% and Van der Velden et al [10], Amsterdam 0.1%.

In the present study, most of the subjects with AP belonged to poor to moderate economic groups. However, as the study analyzed only fourteen cases, perceptible conclusions could not be drawn about the relationship between the socioeconomic status and the prevalence of disease. When prevalence was assessed based on the socioeconomic status, some researchers reported higher prevalence of LAP in low socioeconomic groups (Gjermeo et al [11], 3.8%; Lopez et al [12]).

The report in the present study indicates that a higher percentage of females are affected with AP than males. But since only a total of 1600 patients were analyzed, a conclusion cannot be drawn between the gender affected and AP.

V. CONCLUSION

The prevalence rate in the studied population was found to be 0.87%. The prevalence of AP is highly variable and controversial globally and needs a sincere and systemic approach to treat this.

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