Aggressive periodontitis is characterized by a rapid and severe periodontal destruction in young healthy subjects, and can be subdivided into localized and generalized forms according to the extension of the periodontal destruction. \(^1\) Epidemiological surveys have shown that the prevalence of aggressive periodontitis varies among ethnic groups, regions and countries, and may range from 0.1% to 15%.\(^2,3\)

Human periodontitis is considered as a multifactorial disease, comprising of a heterogeneous group of infectious diseases characterized by the complex host-microorganism infections in the dental periodontium. Periodontal disease may differ with respect to bacterial etiology, host response and clinical disease progression. However, the evidences suggest that underlying host susceptibility factors play a significant role in disease manifestation.\(^4\)

Chronic periodontitis is the most common form of periodontitis, which is most commonly detected in adults, but its onset may be demonstrated at any age. The term “chronic periodontitis” was adopted since it is less restrictive than the age dependant designation of chronic adult periodontitis. For the same reason the term “aggressive periodontitis” was adopted in place of early onset periodontitis.\(^5\)

Diagnosis of periodontitis is generally based on clinical examination, radiographic findings and historical data. Periodontal examination include probing pocket depth measurements as part of complete periodontal charting or periodontal screening and monitoring as in basic periodontal examination (BPE). Different methods for the assessment of alveolar bone loss (ABL) have been widely used in periodontics. Either direct measurements with millimetre graded rulers or more advanced methods including the application of digital

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imaging and computer software programs have been used. Radiographic examination plays an integral part in the assessment of periodontitis. Panoramic radiographs are valuable in assessing the amount and architecture of ABL; it also assesses furcation involvement as well as the presence of local factors such as calculus and overextended restorations. It is useful in treatment planning, in understanding the severity and extent of the problem.

Localized aggressive periodontitis usually has a circumpubertal onset with periodontal damage being localized to permanent first molars and incisors. However, atypical patterns of affected teeth are possible. The disease is frequently associated with the periodontal pathogen Actinobacillus actinomycetemcomitans and neutrophils function abnormalities.

**METHODOLOGY**

The clinical assessment for AP included the following parameters: plaque index (PI) and gingival index (GI). Periodontal Probe was used in assessment of attachment loss. Both the maximum clinical probing depth (PD) and maximum clinical attachment loss (AL) for each tooth was derived by measuring six sites around each tooth and recording the maximum values. Alveolar bone loss on interproximal tooth surfaces was estimated by radiographs. The AP patients were selected on the following criteria: Age of onset of aggressive periodontitis is below 30 years. Two different age groups were made; in first group patients age ranged from 13 to 20 years and in second group from 21 to 30 years.

A total of 1000 patients were examined and were treated from February 2009 to March 2010. Out of these 188 patients were found suffering from aggressive periodontitis, 98 were male and 90 were female.

Inclusion criteria for enrolment in the study was subjects with no systemic disease or pregnancy, the age of 30 years. Subject with history of previous periodontal treatment and third molars were excluded.

**RADIOGRAPHIC IMAGES**

Panoramic radiograph of figures 1 and 2 shows different pattern of bone loss. Figure 1 shows generalized horizontal bone loss. Figure 2 shows localized aggressive periodontitis of a patient with Papillon-lefever syndrome moreover, it shows significant angular and vertical bone loss in incisors and 1st molars.

Figures 3, 4 and 5 showed periapical radiograph. Figures 3 and 5 show horizontal bone loss in mandibular region. Figure 4 shows localized bone loss in anterior teeth. The study was conducted in compliance with declaration on the rights of the patient at Altamash Dental Hospital.

Figures 6 and 7 show clinical pictures of 13 year old boy suffering from Papillon-lefever syndrome with marked recession, spacing(diastema) in anterior teeth.

Figure 8 and 9 show hyperkeratosis of feet which shows a strong relationship of Papillon-lefever syndrome with aggressive periodontitis.

**RESULTS**

The results were evaluated and calculated using Survey Crafter Marketing and Research software along with Microsoft Excel. The study is completely based on quantitative analysis.
Aggressive periodontitis in Karachi sample

Figure 10 shows percentage of male and female patients suffering from aggressive periodontitis. 52% were male and 48% were female having aggressive periodontitis.

DISCUSSION

The objective for this study was to investigate the prevalence of aggressive periodontitis in patient who attended Altamash Dental Hospital. From this study it was found that aggressive periodontitis affects patients who reached puberty until the age of 30 years. In the present study male to female ratio was same.

The American Academy of Periodontology has developed the following parameter on the treatment of aggressive periodontitis: Patients should be informed of the disease process, therapeutic alternatives, potential complications, expected results, and their responsibility in treatment. Consequences of no treatment should be explained. Failure to treat aggressive periodontitis appropriately can result in progressive and often rapid loss of periodontal supporting tissues. This may have an adverse effect upon prognosis and could result in tooth loss. Given this information, patients should then be able to make informed decisions regarding their periodontal therapy.

Present study shows that patients were more prone to localized aggressive periodontitis when compared to generalized aggressive periodontitis. The results of the present study support the earlier studies which show that 50-75% of the attachment of affected teeth in aggressive periodontitis (formerly known as juvenile periodontitis or early onset periodontitis) may be lost in 4-5 years and that the rate of bone loss was about three to four times faster than that in typical years of age (16%). Generalized form of aggressive periodontitis was seen in subjects who were between the age group of 21 to 30 years of age (84%) when compared to age group of 13 to 20 years of age (18%).

Figure 11 shows higher prevalence of localized aggressive periodontitis. 71% were found suffering from localized aggressive periodontitis and 29% of patients were suffering from generalized aggressive periodontitis.

In figure 12 it was also noted that localized aggressive periodontitis was higher in patients between the age group of 13 to 20 years of age (82%) compared to patients between 21 to 30 years of age (16%).

Present study shows that patients were more prone to localized aggressive periodontitis when compared to generalized aggressive periodontitis. The results of the present study support the earlier studies which show that 50-75% of the attachment of affected teeth in aggressive periodontitis (formerly known as juvenile periodontitis or early onset periodontitis) may be lost in 4-5 years and that the rate of bone loss was about three to four times faster than that in typical
periodontitis. The pattern of bone destruction around the affected teeth in aggressive periodontitis was mainly vertical or deep angular.

A robust serum antibody response to infecting agents is frequently detected. Generalized aggressive periodontitis usually affects people under 30 years of age, but patients may be older. There is generalized interproximal attachment loss affecting at least 3 permanent teeth involved. From the data that was collected in the present study localized form of aggressive periodontitis was found more in patients between the age group of 13 years to 20 years whereas generalized periodontitis was seen more in patients between the age of 21 to 30 years of age.

REFERENCES

1 Armitage GC. Development of a classification system for periodontal diseases and conditions. Ann Periodontol 1999; 4: 1–6


