

Role of Doxycycline on the Finding of Fusobacterium Nucleatum in Periodontitis

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AIM: TO INVESTIGATE THE EFFICACY OF SYSTEMICALLY APPLIED DOXYCYCLINE IN A DAILY DOSE OF 1x 100 mgr. I.E. 2x20 mgr. ON FUSOBACTERIUM NUCLEATUM (Fn) IN PATIENTS WITH PERIODONTITIS

MATERIAL AND METHODS

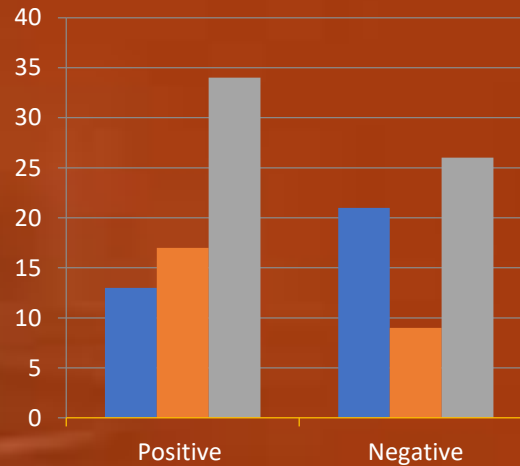
The study group: 60 patients with moderate form of chronic periodontitis where the depth of periodontal pockets was 3-5 mm. aged 30-70 years, all treated with Doxycycline.

- The first group consisted of 30 patients who were treated with Doxycycline 2x20mg. daily for 75 days
- The second group with the same number of subjects who received 1x 100 mg. daily for 30 days.

Gingival fluid samples were taken from the periodontal pockets of all subject from both study groups in order to determine the presence of Fn. The samples were taken on the first visit and the last visit (the 75th day from the start of the doxycycline therapy) and analyzed. The samples were collected with 2 x 5 mm methylcellulose strips (Whatmann 3 MM Chromatography paper) and were plated on Schaedler agar and Brucella agar by rolling on the substrate (Maki's method).

The final identification of bacteria is done with an automatic bacterial species identification system – VITEC 2 COMPAQ

RESULTS



Pearson Chi-square=4,34, $p < 0,05$ ($p = 0,04$) there is a statistically significance in the findings of Fn between the both groups

Table 1: Fn findings on the first and last day of therapy

Doxycycline a 20mg S.2x1	First visit	Last visit (75 days/ end of therapy)		Total
		Positive	Negative	
Count	Positive	7	13	20
Total Percent		23,33%	43,33%	66,67%
Count	Negative	6	4	10
Total Percent		20,00%	13,33%	33,33%
Count	All Groups	13	17	30
Total Percent		43,33%	56,67%	

$p > 0,05$ ($p = 0,17$) there is no statistic significance between the positive and negative findings

- 2x20mg
- 1x100mg
- All groups

Table 2: Fn Findings on the first and the last day of therapy

Doxycycline a 100mg S.1x1	First visit	Last visit (75 days /end of therapy)		Row Totals
		Positive	Negative	
Count	Positive	17	7	24
Total Percent		56,67%	23,33%	80,00%
Count	Negative	4	2	6
Total Percent		13,33%	6,67%	20,00%
Count	All Groups	21	9	30
Total Percent		70,00%	30,00%	

$p > 0,05$ ($p = 0,55$) /McNemar's test/there is no statistically significance between the positive and negative findings

CONCLUSION

A daily administered dose of 2x20 mg. doxycycline in patients with periodontitis more effectively reduces anaerobe Fusobacterium nucleatum (Fn.)

