Results

1. Comparison of oral hygiene status between study groups

Assessing oral hygiene status using the full mouth plaque index at baseline showed a statistically significant difference between group I and the control group. Patients with asthma and periodontitis had worse oral hygiene at baseline as measured by the plaque index - median = 0.46 (IQR 0.26 - 0.78) than healthy subjects - median = 0.13 (IQR 0 - 0.31). Comparison between group I and group II and between group II and the control group showed no statistically significant differences.

Similar results as above were observed when analyzing the plaque index for the medial and lateral sextants at baseline. A statistically significant difference also occurred between group I with medians of 0.58 (IQR 0.24 - 0.95); 0.43 (IQR 0.2 - 0.74), respectively, and the control group with medians of 0.13 (IQR 0 - 0.3); 0.13 (IQR 0 - 0.31), respectively.

When examined two weeks after baseline, the full mouth plaque index was significantly different between group I and the control group. Oral hygiene in patients in group I - median 0.28 (IQR 0.06 - 0.59) was worse than in the control group - median 0.03 (IQR 0 - 0.14). There were no statistically significant differences between the other groups.

The plaque index (PI) value in the medial and lateral sextants was significantly different between group I and the control group. The group with asthma and periodontitis had worse hygiene status in the area of anterior and posterior teeth with medians of 0.22 (IQR 0.02 - 0.65); 0.29 (IQR 0.07 - 0.56), respectively, than the control group with medians of 0 (IQR 0 - 0.08); 0 (IQR 0 - 0.14), respectively. Between the other groups, the differences were not statistically significant.

Similar to the whole mouth PI value, the analysis of the change in this parameter for the median sextants between the 1st and 2nd examinations showed a statistically significant difference between the 1st and 3rd groups.

The study at three months showed that the plaque index for the whole mouth was statistically significantly different between group I (Perio-Asthma) and the control group. The group with asthma and periodontal disease - median 0.39 (IQR 0.18 - 0.76) had worse oral hygiene than the control group - median 0 (IQR 0 - 0.20). No statistically significant differences were found between the other groups. There were no statistically significant differences between the groups in the change in the index between the study after three months and the previous studies.

There were no statistically significant differences between the groups in the change in the PI index for the middle sextants between the study at three months and the earlier studies.

The plaque index (PI) values for the lateral sextants are statistically significantly different between group I and the control group and between group II and the control group. Patients with asthma and periodontal disease - median 0.24 (IQR 0.09 - 0.69) and patients with asthma without periodontitis - median 0.23 (IQR 0.06 - 0.4) have worse hygiene status in the lateral sextants than healthy patients - median 0 (IQR 0 - 0.23).

When examined six months after baseline, a statistically significant difference in full mouth plaque index values was observed between group I and control group and between-group II and control group. Patients with asthma and periodontal disease had a median score of 0.45 (IQR 0.2 - 0.95) for oral hygiene at six months compared to patients in the control group with a median score of 0 (IQR 0 - 0.07). Asthma patients without periodontitis - median 0.12 (IQR 0.05 - 0.38) also had significantly worse oral hygiene than control group patients - median 0 (IQR 0 - 0.07).

There was a statistically significant difference between group I and the control group in assessing the change in whole mouth PI between baseline. After six months, the effect of scaling and education was significantly greater in group I compared to the control group. There were no statistically significant differences in whole mouth PI index values over the other study periods. Evaluating the central sextant plaque index six months after baseline showed statistically significant differences between groups I and II and between-group I and the control group. Patients with asthma and periodontitis - median 0.43 (IQR 0.13 - 0.90) had worse oral hygiene than patients with asthma but without periodontitis - median 0.08 (IQR 0 - 0.25) and patients in the control group - median 0 (IQR 0 - 0.13). No statistically significant difference was found between group II and the control group.

There was a significant difference between group I and the control group in the change of the PI index value for the median sextant between the examination at two weeks and six months - in group I, there was an increase in the value of this index. When analyzing this result, it should be taken into account that no statistically significant difference was detected between the groups in the change of PI index from baseline to 6 months. Plaque index (PI) values for the lateral sextants are statistically significantly different between groups I, the control group, and between-group II and the control group. Patients with asthma and

periodontal disease - median 0.49 (IQR 0.08 - 0.83) and patients with asthma without periodontitis - median 0.15 (IQR 0.03 - 0.45) have worse hygiene status in the lateral sextants than healthy patients - median 0 (IQR 0 - 0).

2. Comparison of gingival bleeding status between study groups

Assessing the bleeding on probing (BOP) index for the entire oral cavity at baseline showed statistically significant differences between all groups. The highest number of bleeding sites was found in patients in group I, with a median, mean BOP of 0.31 (IQR 0.19 - 0.43), corresponding to bleeding in 31% of the study sites. In group II, fewer bleeding sites were observed, with a median, mean BOP score of 0.15 (IQR 0.1 - 0.21). On the other hand, the least number of bleeding sites was observed in the control group, median mean BOP - 0 (IQR 0 - 0.06).

Two weeks after the baseline examination, statistically significant differences in the mean values of the BOP index were observed between all groups, as shown by the medians: in group I 0.22 (IQR 0.11 - 0.34), in group II 0.10 (IQR 0.05 - 0.16), and the control group 0 (IQR 0 - 0.03).

Comparing the changes between the baseline examination and after two weeks, the median values of the mean BOP index for the whole oral cavity decreased. Still, these changes were not statistically different between the groups. Supragingival and subgingival scaling with root surface smoothing and oral hygiene instruction performed at the previous visit improved hygiene status-the index values decreased in each group. Still, no significant advantage was found in any group. Statistically significant differences were found in the BOP index for central sextants when examined after two weeks between all groups. The highest number of bleeding sites was found in group I patients with a median of 0.22 (IQR 0.13 - 0.34), fewer in group II subjects with a median of 0.08 (IQR 0.02 - 0.17), and the lowest in control subjects with a median of 0 (IQR 0 - 0).

A study performed after two weeks showed that the median bleeding index at probing in the middle sextants decreased in all study groups. The difference in lesion size was statistically significant only between group I and the control group.

Analysis of the bleeding index during probing in the lateral sextants at two weeks revealed a statistically significant difference between groups I, the control, and between-group II and the control group. Patients with asthma and periodontal disease - median 0.20 (IQR 0.10 - 0.31) and patients with asthma without periodontitis - median 0.11 (IQR 0.04 - 0.16) have worse hygiene status in the lateral sextants than healthy patients - median 0 (IQR 0 - 0).

The study showed that after three months from baseline, there were statistically significant differences between all groups in the values of the BOP index for the whole oral cavity. The highest number of bleeding sites continued to be in the group I median 0.25 (IQR 0.12 - 0.37), less in group II median 0.08 (IQR 0.02 - 0.21), and the lowest in the control group median 0 (IQR 0 - 0). There were no statistically significant differences between the groups when analyzing the mean values of BOP indexes between the study after three months and after two weeks. When evaluating the median sextant BOP index three months after the baseline examination, statistically significant differences were noted between all groups. The most bleeding sites were found in group I, median 0.23 (IQR 0.15 - 0.39), less in group II (Asthma), median - 0.06 (0 - 0.21), and the least in control subjects, median 0 (IQR 0 - 0).

However, there were no statistically significant differences between groups in comparing the mean differences in BOP index values between the 3rd and 2nd examinations. Analysis of the bleeding index during probing in the lateral sextants at three months revealed a statistically significant difference between group I and the control group and between group II and the control group. Patients with asthma and periodontal disease - median 0.21 (IQR 0.08 - 0.34) and patients with asthma without periodontitis - median 0.09 (IQR 0.02 - 0.17) have worse hygiene status in the lateral sextants than healthy patients - median 0 (IQR 0 - 0).

Comparing the median values of BOP indices for the whole oral cavity showed statistically significant differences between group I and control and between group II and control. Medians were: group I 0.18 (IQR 0.08 - 0.31), group II 0.07 (IQR 0.02 - 0.13), control group - 0 (IQR 0 - 0).

Analyzing the differences in BOP values for the whole oral cavity between the examination after six months and the previous ones, it was noted that there were statistically significant differences between group I and the control group in the change of BOP values between examinations 2 and 4 and 3 and 4. In the control group, the value of the difference was close to 0 (minimal changes in the BOP index), while in group I, there was an increase in the BOP index.

When evaluating the central sextants for bleeding during probing at the 6-month follow-up, statistically significant differences were noted between all groups. The greatest number of bleeding sites in the central part of the dentition was seen in group I with a median of 0.20 (0.09 - 0.33); less in group II with a median of 0.06 (IQR 0 - 0.13); and the least in the control group with a median of 0 (IQR 0 - 0).

Analyzing the differences in the values of the BOP coefficients for the median sextants between the examination after six months and before, it was found that a statistically significant difference exists between group I and the control group concerning the change between the baseline and the last examination.

Analysis of the bleeding rate during probing in the lateral sextants at six months revealed a statistically significant difference between group I and the control group and between group II and the control group. Patients with asthma and periodontal disease - median 0.15 (IQR 0.04 - 0.27) and patients with asthma without periodontitis - median 0.05 (IQR 0.02 - 0.13) have worse hygiene status in the lateral sextants than healthy patients - median 0 (IQR 0 - 0).

Summarizing the above results, it may be confirmed that in the group of patients who have bronchial asthma and periodontal disease, systematic monitoring of the periodontal status guarantees a significant improvement because, within six months after scaling and instruction, the hygiene level tends to return to the state before therapeutic intervention.

3. Comparison of periodontal status between the study groups

At baseline, a statistically significant difference in the number of examined interproximal sites was observed between groups I, II, and control groups. Patients in the control group had a higher number of interproximal sites with a median of 108 (IQR 100 - 112) than group I with a median of 96 (IQR 80 - 104). Among asthmatic patients, subjects in group II had a higher number of teeth with a median of 112 (IQR 104 - 112) than in group I. In subsequent studies, the number of teeth did not change between patient groups; therefore, statistical relationships similar to the baseline study persist in the following measurements.

There were no statistically significant differences in the values of periodontal status parameters (CAL and PD) for the whole oral cavity and the medial and lateral sextants between successive examinations in group I. Given the absence of periodontal disease in group II and the control group; it is worth looking at the comparison between these groups. The results may suggest a difference between these groups, which may be due to the use of anti-asthma medications by asthma patients.

There was a statistically significant difference between group II and the control group in the clinical mean pocket depth (PD) values for the whole mouth at baseline. The pockets were deeper in group II with a median of 2.19 mm (IQR 2.11mm - 2.31mm) than in the control group with a median of 1.87 mm (IQR 1.63mm - 2.04mm). In the comparison of this parameter for the median sextants, a statistically significant difference was also observed. In group II, the mean clinical pocket depths in the middle sextants were greater, with a median of 2.09 mm (IQR 1.99 - 2.22) than in the control group, with a median of 1.82 mm (IQR 1.57 mm - 2 mm).

In subsequent studies, statistically significant differences were also observed in the mean clinical depth of periodontal pockets throughout the oral cavity between group II and the control group. In group II, the mean clinical depth of periodontal pockets - median in subsequent studies was 2.17 mm (IQR 2.06 mm - 2.30 mm); 2.16 mm (IQR 2.07 mm - 2.31 mm), respectively; 2.11 mm (IQR 2.03 mm - 2.20 mm) and was greater than the control group medians of 1.83 mm (IQR 1.70 mm - 1.98 mm); 1.83 mm (IQR 1.69 mm - 2.03 mm; 1.78 mm (IQR 1.66 mm - 1.87 mm). Subsequent studies showed statistically significant differences in the mean clinical gingival pocket depths for the medial and lateral sextants between group II and the control group. Group II had deeper gingival pockets in the middle sextants with medians of 2.07 mm (IQR 2.01 mm - 2.15 mm); 2.05 mm (IQR 2 mm - 2.19 mm), respectively; 2 mm (IQR 1.93 mm - 2.06 mm) compared to the control group with medians of 1.74 mm (IQR 1.58 mm - 1.96 mm); 1.73 mm (IQR 1.57 mm - 2 mm); 1.68 mm (IQR 1.56 mm - 1.79 mm), respectively. The same behavior was observed in the lateral sextants, where there were deeper gingival pockets in group II, with medians of 2.28 (IQR 2.17 - 2.42); 2.24 (IQR 2.09 - 2.41), respectively; 2.28 (IQR 2.12 - 2.37); 2.21 (IQR 2.12 - 2.3) than in the control group - medians of 1.98 (IQR 1.68 - 2.09); 1.89 (IQR 1.78 - 2.05); 1.91 (IQR 1.69 - 2.06); 1.84 (IQR 1.73 - 2. 03).

There is a noticeable presence of deeper gingival pockets in the asthmatic group than in the control group, which may be associated with the use of anti-asthmatic medications (including inhaled corticosteroids). Analyzing the changes in mean pocket depths between studies, no statistically significant differences were found between Group II and the control group.

There were no statistically significant differences in the number and percentage of periodontal pockets PD = 4mm - 5mm between group II - medians 1 (IQR 0 - 2); 0 (IQR 0 - 2) between studies; 0 (IQR 0 - 2); 0 (IQR 0 - 2), corresponding to 0.89% (IQR 0% - 1.86%); 0% (IQR 0% - 1.9%); 0% (IQR 0% - 1.8%); 0% (IQR 0% - 1.8%) and the control group - medians 0 (IQR 0 - 0); 0% (IQR 0% - 0%).

There is no statistically significant difference between group II and the control group in the number and percentage of PD gingival pockets ≤ 3 mm in each study. In the asthma group, the number of PD gingival pockets ≤ 3 mm (medians 107.5 (IQR 99.5 - 110); 107 (IQR 98.5 - 110); 107.5 (IQR 100.5 - 110); 108 (IQR 100.5 - 110) corresponding to 97.5% (IQR 96.9% - 98.2%); 98.2% (IQR 96.8% - 98.2%); 98.2% (IQR 96.4% - 98.2%) respectively; 98.1% (IQR 96.4% - 98.2%) was slightly higher than in the control group (median 106.5 (IQR 98.5 - 100) which corresponds to 98.5% (IQR 98% - 98.2%) at baseline and in subsequent studies median 106.5 (IQR 98.5 - 110); 106.5 (IQR 97.5 - 110); 106.5 (IQR 98.5 - 110), representing 98.2% (IQR 97.3% - 98.2%); 98.2% (IQR 97.9% - 98.2%); 98.2% (IQR 98% - 98.2%).

Comparing the results of the mean clinical level of connective tissue attachment (CAL) for the whole oral cavity and the medial and lateral sextants in group II and the control group at successive examinations showed no statistically significant differences.

There was also no statistically significant difference between group II and the control group in changes in these parameters between examinations during the 6-month follow-up.

There was no statistically significant difference between groups in the number and percentage of interproximal sites with clinical connective tissue attachment levels ≤ 4 mm (CAL ≤ 4 mm) and > 4 mm (CAL > 4 mm).

Table S1. Comparison of examined parameters in groups - Baseline.

Examined parameter	GROUP I PERIO-ASTHMA N=40	GROUP II ASTHMA N=40	GROUP III CONTROL N=40	ANOVA Kruskal-Wallis	Test U Mann-Whitney		
					P-value I/II	P-value I/III	P-value II/III
	Median (IQR)	Median (IQR)	Median (IQR)	α=0,05	α=0,017 (Bonferroni correction)		
Number of periodontal pockets PD ≥6 mm	0(0-2)	0(0-0)	0(0-0)	p=0,0001	p=0,003	p=0,005	p=0,9999
Percentage of periodontal pockets PD ≥6 mm	0% (0% - 2%)	0% (0% - 0%)	0% (0%- 0%)	p=0,0001	p=0,003	p=0,005	p=0,9999
Number of periodontal pockets PD 4-5 mm	6,5 (2,5 – 14,5)	1(0–2)	0(0–0)	p=0,0001	p=0,000001	p=0,000001	p=0,07
Percentage of periodontal pockets PD 4-5 mm	6,9% (3,2% - 17,4%)	0,89 % (0% - 1,86%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,09
Number of periodontal pockets PD ≤3 mm	79,5 (62,5 – 94)	107,50 (99,5 – 110)	106,5 (98,5 – 110)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of periodontal pockets PD ≤3 mm	90,5% (80,3% - 95,4%)	97,5% (96,9% - 98,2%)	98,2% (98% - 98,2%)	p=0,0001	p=0,000001	p=0,000001	p=0,25
Number of sites with loss of CAL ≤4 mm	88,5 (73 - 100)	111,5 (104 - 112)	108 (100 - 112)	p=0,0001	p=0,000001	p=0,000003	p=0,9999
Percentage of sites with loss of CAL ≤4 mm	97,5% (93,2% - 99,5%)	100% (100% – 100%)	100% (100% – 100%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999

Number of sites with loss of CAL >4 mm	2 (0,5 - 5,5)	0(0-0)	0(0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of sites with loss of CAL >4 mm	2,5% (0,46% - 6,79%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Number of examinated teeth	25,5 (21 - 28)	30 (28 - 31)	30 (27 - 32)	p=0,0001	p=0,00002	p=0,000004	p=0,9999
Number of examinated interproximal sites	96 (80 - 104)	112 (104 - 112)	108 (100 - 112)	p=0,0001	p=0,000001	p=0,00008	p=0,9999
Decay	2(1–3)	1(0–3)	0 (0 – 1,5)	p=0,0048	p=0,54202	p=0,00559	p=0,2289
Missing	6,5 (4 – 11)	2(1–4)	1 (0 – 4,5)	p=0,0001	p=0,00003	p=0,00001	p=0,9999
Filling	11,5 (4,5 – 15)	12 (8 – 15,5)	8 (4-10)	p=0,0110	p=0,65496	p=0,23948	p=0,00857
PUW	20 (16,5 – 23)	16 (12,5 – 20,5)	11,5 (7 – 16,5)	p=0,0001	p=0,029	p=0,000001	p=0,026
CAL entire oral cavity	0,97 (0,39 - 1,69)	0 (0 - 0,08)	0 (0 - 0,09)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD entire oral cavity	2,58 (2,35 - 2,78)	2,19 (2,11 - 2,31)	1,87 (1,63 - 2,04)	p=0,0001	p=0,0001	p=0,000001	p=0,0001
PI entire oral cavity	0,46 (0,26 - 0,78)	0,27 (0,12 - 0,55)	0,13 (0 - 0,31)	p=0,0001	p=0,07	p=0,000005	p=0,038

BOP entire oral cavity	0,31 (0,19 - 0,43)	0,15 (0,1 - 0,21)	0 (0 - 0,06)	p=0,0001	p=0,003	p=0,00001	p=0,000003
CAL sextants central	0,44 (0,09 – 1,4)	0(0–0)	0 (0-0)	p=0,0001	p=0,000001	p=0,00001	p=0,9999
PD sextants central	2,50 (2,32 – 2,77)	2,09 (1,99 – 2,22)	1,82 (1,57 – 2,00)	p=0,0001	p=0,00002	p=0,00001	p=0,0001
PI sextants central	0,58 (0,24 – 0,95)	0,25 (0 – 0,63)	0,13 (0 – 0,3)	p=0,0001	p=0,02	p=0,00008	p=0,38
BOP sextants central	0,34 (0,19 – 0,49)	0,14 (0,05 – 0,22)	0 (0 – 0,04)	p=0,0001	p=0,001	p=0,000001	p=0,00008
CAL sextants lateral	1,41 (0,64 – 2,04)	0 (0 – 0,14)	0 (0 – 0,16)	p=0,0001	p=0,00001	p=0,00001	p=0,9999
PD sextants lateral	2,66 (2,37 – 2,95)	2,28 (2,17 – 2,42)	1,98 (1,68 – 2,09)	p=0,0001	p=0,00143	p=0,00001	p=0,00011
PI lateral sextants	0,43 (0,20 – 0,74)	0,33 (0,10 – 0,70)	0,13 (0 – 0,31)	p=0,0001	p=0,41783	p=0,00008	p=0,01945
BOP sextants lateral	0,26 (0,18 – 0,41)	0,14 (0,08 – 0,22)	0 (0 – 0,06)	p=0,0001	p=0,01551	p=0,01551	p=0,00001

Table S2. Comparison of examined parameters in groups - Examination after two weeks.

After 2 weeks

Examined parameter	GROUP I PERIO-ASTHMA N=40	GROUP II ASTHMA N=40	GROUP III CONTROL N=40	ANOVA Kruskal-Wallis	Test U Mann-Whitney		
					P-value I/II	P-value I/III	P-value II/III
	Median (IQR)	Median (IQR)	Median (IQR)	α=0,05	α=0,017 (Bonferroni correction)		
Number of periodontal pockets PD ≥ 6 mm	0(0-1)	0(0-0)	0(0-0)	p=0,0001	p=0,04	p=0,06	p=0,9999
Percentage of periodontal pockets PD ≥ 6 mm	0% (0% - 1,1%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,04	p=0,06	p=0,9999
Number of periodontal pockets PD 4-5 mm	5 (2 – 11,5)	0(0–2)	0(0–0)	p=0,0001	p=0,00003	p=0,000001	p=0,4
Percentage of periodontal pockets PD 4-5 mm	6,3% (2,4% - 13,0%)	0% (0 %– 1,9%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,5
Number of periodontal pockets PD ≤3 mm	81 (63,5 – 95)	107 (98,5 – 110)	106,5 (98,5 – 110)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of periodontal pockets PD ≤3 mm	92,0% (83,6% - 96,4%)	98,2% (96,8% – 98,2%)	98,2% (97,3% - 98,2%)	p=0,0001	p=0,000002	p=0,000001	p=0,9999
Number of sites with loss of CAL ≤4 mm	89 (73-100)	112 (104-112)	108 (100-112)	p=0,0001	p=0,000001	p=0,000002	p=0,9999
Percentage of sites with loss of CAL ≤4 mm	97,5% (93,8% – 99,5%)	100% (100% – 100%)	100% (100% – 100%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999

Number of sites with loss of CAL >4 mm	2 (0,5 - 6)	0(0-0)	0(0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of sites with loss of CAL >4 mm	2,5% (0,5% - 6,3%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Number of examined teeth	25,5 (21 - 28)	30 (28 - 31)	30 (27-32)	p=0,0001	p=0,000024	p=0,000004	p=0,9999
Number of examined interproximal sites	96 (80-103,5)	112 (104 - 112)	108 (100-112)	p=0,0001	p=0,000001	p=0,00005	p=0,9999
Decay	2 (1-3)	1(0–3)	0 (0 – 1,5)	p=0,0048	p=0,54202	p=0,00559	p=0,22889
Missing	6,5 (4 – 11)	2(1–4)	1 (0 – 4,5)	p=0,0001	p=0,00003	p=0,00001	p=0,9999
Filling	11,5 (4,5 – 15)	12 (8 – 15,5)	8(4–10)	p=0,0133	p=0,64599	p=0,27736	p=0,01045
PUW	20 (16,5 – 23)	16 (12,5 – 20,5)	11,5 (7 – 16,5)	p=0,0001	p=0,028	p=0,000001	p=0,029
CAL entire oral cavity	0,97 (0,40 - 1,65)	0 (0 - 0,08)	0 (0 - 0,09)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD entire oral cavity	2,38 (2,26 - 2,82)	2,17 (2,06 - 2,30)	1,83 (1,70 - 1,98)	p=0,0001	p=0,0009	p=0,000001	p=0,00005
PI entire oral cavity	0,28 (0,06 - 0,59)	0,13 (0,03 - 0,39)	0,03 (0-0,14)	p=0,0001	p=0,3	p=0,00007	p=0,025

BOP entire oral cavity	0,22 (0,11 - 0,34)	0,10 (0,05 - 0,16)	0 (0 - 0,03)	p=0,0001	p=0,009	p=0,000001	p=0,000003
CAL sextants central	0,44 (0,1 – 1,4)	0(0–0)	0 (0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD sextants central	2,34 (2,21 – 2,67)	2,07 (2,01 – 2,15)	1,74 (1,58 – 1,96)	p=0,0001	p=0,00003	p=0,000001	p=0,0001
PI sextants central	0,22 (0,02 – 0,65)	0,04 (0 – 0,41)	0 (0 – 0,08)	p=0,001	p=0,2	p=0,001	p=0,3
BOP sextants central	0,22 (0,13 – 0,34)	0,08 (0,02 – 0,17)	0(0–0)	p=0,0001	p=0,0027	p=0,000001	p=0,00004
CAL sextants lateral	1,41 (1,10 – 2,06)	0 (0 – 0,14)	0 (0 – 0,16)	p=0,0001	p=0,00001	p=0,00001	p=0,9999
PD lateral sextants	2,39 (2,24 – 2,85)	2,24 (2,09 – 2,41)	1,89 (1,78 – 2,05)	p=0,0001	p=0,02163	p=0,00001	p=0,00006
PI lateral sextants	0,29 (0,07 – 0,56)	0,12 (0,04 – 0,34)	0 (0 – 0,14)	p=0,0004	p=0,80246	p=0,00044	p=0,02142
BOP sextants lateral	0,20 (0,10 – 0,31)	0,11 (0,04 – 0,16)	0 (0 – 0,04)	p=0,0001	p=0,10414	p=0,00001	p=0,00001

Table S3. Comparison of the examined parameters in groups - after 3 months.

After 3 months

Examined parameter	GROUP I PERIO-ASTHMA N=40	GROUP II ASTHMA N=40	GROUP III CONTROL N=40	ANOVA Kruskal-Wallis	Test U Mann-Whitney		
					P-value I/II	P-value I/III	P-value II/III
	Median (IQR)	Median (IQR)	Median (IQR)	α=0,05	α=0,017 (Bonferroni correction)		
Number of periodontal pockets PD ≥6 mm	0 (0 - 1,5)	0 (0-0)	0(0-0)	p=0,0001	p=0,011	p=0,019	p=0,9999
Percentage of periodontal pockets PD ≥6 mm	0% (0% - 2%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,011	p=0,019	p=0,9999
Number of periodontal pockets PD 4-5 mm	5,5 (3,5 – 9)	0(0–2)	0(0–0)	p=0,0001	p=0,000001	p=0,000001	p=0,85
Percentage of periodontal pockets PD 4-5 mm	6,1% (4,0% - 10,7%)	0% (0% - 1,8%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,93
Number of periodontal pockets PD ≤3 mm	86 (65,5 – 95,5)	107,5 (100,5 – 110)	106,5 (97,5 – 110)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of periodontal pockets PD ≤3 mm	92,2% (86,5% - 95,2%)	98,2% (96,4% - 98,2%)	98,2% (97,9% - 98,2%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Number of sites with loss of CAL ≤4 mm	89,5 (71-100,5)	112 (104-112)	108 (100-112)	p=0,0001	p=0,000001	p=0,000005	p=0,9999
Percentage of sites with loss of CAL ≤4 mm	97,5% (90,7% - 99,6%)	100% (100% – 100%)	100% (100% – 100%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999

Number of sites with loss of CAL >4 mm	2 (0,5 - 5,5)	0 (0-0)	0(0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of sites with loss of CAL>4	2,5% (0,4% - 9,3%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Number of examinated teeth	25,5 (20 - 28)	30 (28 - 31)	30 (27 - 32)	p=0,0001	p=0,00002	p=0,000004	p=0,9999
Number of examinated interproximal sites	96 (80 -104)	112 (104 - 112)	108 (100 - 112)	p=0,0001	p=0,000001	p=0,00007	p=0,9999
Decay	2(1–3)	1(0–3)	0(0–1)	p=0,002	p=0,528	p=0,00245	p=0,138
Missing	6,5 (4 – 12)	2(1–4)	1 (0 – 4,5)	p=0,0001	p=0,00003	p=0,00001	p=0,9999
Filling	11,5 (4,5 – 15)	12 (8 – 15,5)	8 (4- 12,5)	p=0,0176	p=0,6301	p=0,345	p=0,01396
PUW	20 (16,5 – 23)	16 (12,5 – 20,5)	11,5 (7 – 16,5)	p=0,0001	p=0,026	p=0,000001	p=0,029
CAL entire oral cavity	0,97 (0,39 - 1,68)	0 (0 - 0,08)	0 (0 - 0,10)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD entire oral cavity	2,54 (2,28 - 2,71)	2,16 (2,07 - 2,31)	1,83 (1,69 - 2,03)	p=0,0001	p=0,0003	p=0,000001	p=0,0001
PI entire oral cavity	0,39 (0,18 - 0,76)	0,14 (0,04 - 0,27)	0 (0 - 0,20)	p=0,0001	p=0,025	p=0,000001	p=0,05

BOP entire oral cavity	0,25 (0,12 - 0,37)	0,08 (0,02 - 0,21)	0(0-0)	p=0,0001	p=0,006	p=0,000001	p=0,00001
CAL sextants central	0,47 (0,07 – 1,41)	0(0–0)	0 (0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD sextants central	2,47 (2,20 – 2,64)	2,05 (2,00 – 2,19)	1,73 (1,57 – 2,00)	p=0,0001	p=0,00002	p=0,000001	p=0,0002
PI sextants central	0,38 (0,15 – 0,90)	0,04 (0 – 0,29)	0 (0 – 0,15)	p=0,0001	p=0,0008	p=0,00001	p=0,96
BOP sextants central	0,23 (0,15 – 0,39)	0,06 (0 – 0,21)	0(0–0)	p=0,0001	p=0,0033	p=0,000001	p=0,0003
CAL sextants lateral	1,44 (0,63 – 2,13)	0 (0 – 0,15)	0 (0 – 0,18)	p=0,0001	p=0,00001	p=0,00001	p=0,9999
PD lateral sextants	2,55 (2,3 – 2,87)	2,28 (2,12 – 2,37)	1,91 (1,69 – 2,06)	p=0,0001	p=0,00831	p=0,00001	p=0,00009
PI lateral sextants	0,24 (0,09 – 0,69)	0,23 (0,06 – 0,4)	0 (0 – 0,23)	p=0,0004	p=0,854	p=0,00039	p=0,018
BOP sextants lateral	0,21 (0,08 – 0,34)	0,09 (0,02 – 0,17)	0(0–0)	p=0,0001	p=0,026	p=0,00001	p=0,00002

Table S4. Comparison of the examined parameters in groups - after 6 months.

	After 6 months						
Examined parameter	GROUP I PERIO-ASTHMA N=40	GROUP II ASTHMA N=40	GROUP III CONTROL N=40	ANOVA Kruskal-Wallis	Test U Mann-Whitney		
					P-value I/II	P-value I/III	P-value II/III
	Median (IQR)	Median (IQR)	Median (IQR)	α=0,05	α=0,017 (Bonferroni correction)		
Number of periodontal pockets PD ≥6 mm	0(0-1)	0(0-0)	0(0-0)	p=0,0001	p=0,06	p=0,1	p=0,9999
Percentage of periodontal pockets PD ≥6 mm	0% (0% - 1%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,06	p=0,09	p=0,9999
Number of periodontal pockets PD 4-5 mm	4,5 (2 – 8)	0(0–2)	0(0–0)	p=0,0001	p=0,000001	p=0,000001	p=0,4
Percentage of periodontal pockets PD 4-5 mm	5,5% (2,4% - 9,9%)	0% (0% - 1,8%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,4
Number of periodontal pockets PD ≤3 mm	83 (67,5 – 96,5)	108 (100,5 – 110)	106,5 (98,5 – 110)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of periodontal pockets PD ≤3 mm	93,4% (87,8% - 96,6%)	98,1% (96,4% - 98,2%)	98,2% (98,0% - 98,2%)	p=0,0001	p=0,000001	p=0,000001	p=0,88
Number of sites with loss of CAL ≤4 mm	88 (68,5 - 99,5)	112 (104 - 112)	108 (100-112)	p=0,0001	p=0,000001	p=0,000002	p=0,9999
Percentage of sites with loss of CAL ≤4 mm	96,6% (90,2% – 99,1%)	100% (100% – 100%)	100% (100% – 100%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999

Number of sites with loss of CAL >4 mm	3(1-8)	0(0-0)	0 (0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Percentage of sites with loss of CAL >4 mm	3,4% (0,9 % - 9,8%)	0% (0% - 0%)	0% (0% - 0%)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
Number of examinated teeth	25,5 (20 - 28)	30 (28 - 31)	30 (27 - 32)	p=0,0001	p=0,00002	p=0,000004	p=0,9999
Number of examinated interproximal sites	95,5 (79,5 - 104)	112 (104 - 112)	108 (100 - 112)	p=0,0001	p=0,000001	p=0,00005	p=0,9999
Decay	2(1–3)	1(0–3)	0(0–1)	p=0,0020	p=0,52803	p=0,00245	p=0,13834
Missing	6,5 (4 – 12)	2(1–4)	1 (0 – 4,5)	p=0,0001	p=0,00003	p=0,00001	p=0,9999
Filling	11,5 (4,5 - 15)	12 (8 – 15,5)	8 (4 – 12,5)	p=0,0176	p=0,63006	p=0,34471	p=0,01396
PUW	20 (16,5 - 23)	16 (12,5 – 20,5)	11,5 (7 – 17,5)	p=0,0001	p=0,025	p=0,000001	p=0,031
CAL entire oral cavity	0,96 (0,4-1,66)	0 (0 - 0,08)	0 (0 - 0,09)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD entire oral cavity	2,41 (2,21 - 2,59)	2,11 (2,03 - 2,20)	1,78 (1,66 - 1,87)	p=0,0001	p=0,0007	p=0,000001	p=0,00005
PI entire oral cavity	0,45 (0,2 - 0,95)	0,12 (0,05 - 0,38)	0 (0 - 0,07)	p=0,0001	p=0,04	p=0,000001	p=0,0005

BOP entire oral cavity	0,18 (0,08 - 0,31)	0,07 (0,02 - 0,13)	0(0-0)	p=0,0001	p=0,05	p=0,000001	p=0,000003
CAL sextants central	0,46 (0,07 – 1,43)	0(0–0)	0(0-0)	p=0,0001	p=0,000001	p=0,000001	p=0,9999
PD sextants central	2,27 (2,09 – 2,51)	2,00 (1,93 – 2,06)	1,68 (1,56 – 1,79)	p=0,0001	p=0,00006	p=0,000001	p=0,0007
PI sextants central	0,43 (0,13 – 0,90)	0,08 (0 – 0,25)	0 (0 – 0,13)	p=0,0001	p=0,006	p=0,000002	p=0,2
BOP sextants central	0,20 (0,09 – 0,33)	0,06 (0 – 0,13)	0(0–0)	p=0,0001	p=0,008	p=0,000001	p=0,0003
CAL sextants lateral	1,48 (0,62 – 2,16)	0 (0 – 0,15)	0 (0 – 0,16)	p=0,0001	p=0,00000	p=0,00001	p=0,9999
PD lateral sextants	2,57 (2,29 – 2,70)	2,21 (2,12 – 2,30)	1,84 (1,73 – 2,03)	p=0,0001	p=0,00175	p=0,00001	p=0,00008
PI lateral sextants	0,49 (0,08 – 0,83)	0,15 (0,03 – 0,45)	0 (0 – 0,03)	p=0,0001	p=0,61961	p=0,00001	p=0,00004
BOP sextants lateral	0,15 (0,04 – 0,27)	0,05 (0,02 – 0,13)	0(0–0)	p=0,0001	p=0,49642	p=0,00001	p=0,00001

Table S5. Intergroup comparison of differences between studies of selected variables (CAL, PD, PI, BOP) - for entire oral cavity.

	PERIO-ASTHMA n=40 Median (IQR)	ASTHMA n=40 Median (IQR)	CONTROL n=40 Median (IQR)	ANOVA Kruskal-Wallis α=0,05	Test U Mann-Whitney I/II α=0,017 (Bonferroni correction)	I/III	II / III
CAL							
W-3	0 (-0,03 - 0,04)	0 (0-0)	0 (0-0)	p=0,923			
W-1	0(0-0)	0 (0-0)	0 (0-0)	p=0,677			
1-2	0 (-0,02 - 0,03)	0 (0-0)	0 (0-0)	p=0,528			
2-3	0 (-0,01 - 0,03)	0 (0-0)	0 (0-0)	p=0,599			
1-3	0 (-0,04 - 0,04)	0 (0-0)	0 (0-0)	p=0,94			
PD							
W-3	-0,17 (-0,38 - 0,1)	-0,09 (-0,18 - 0,04)	-0,03 (-0,19 - 0,05)	p=0,314			
W-1	-0,13 (-0,25 - 0,05)	-0,04 (-0,15 - 0,03)	-0,01 (-0,12 - 0,1)	p=0,088			
1-2	0,06 (-0,1 - 0,21)	-0,01 (-0,13 - 0,16)	0 (-0,1 - 0,13)	p=0,478			
2-3	**-0,14 (-0,27 - 0,03)**	-0,05 (-0,19 - 0,04)	-0,06 (-0,11 - 0,04)	p=0,236			
1-3	-0,05 (-0,26 - 0,14)	-0,07 (-0,18 - 0,09)	-0,05 (-0,13 - 0,04)	p=0,946			
PI							
W-3	-0,08 (-0,24 - 0,01)	-0,05 (-0,12 - 0)	**0 (-0,05 - 0)**	p=0,014	p=0,999	p=0,015	p=0,109
W-1	**-0,09 (-0,17 - 0,01)**	**-0,04 (-0,12 - 0)**	**0 (-0,03 - 0)**	p=0,005	p=0,895	p=0,004	p=0,093
1-2	0,02 (-0,05 - 0,1)	-0,01 (-0,06 - 0,07)	0 (0-0)	p=0,797			
2-3	-0,04 (-0,15 - 0,05)	-0,02 (-0,08 - 0,03)	0 (0-0)	p=0,263			
1-3	**-0,05 (-0,14 - 0,05)**	-0,03 (-0,07 - 0,04)	0 (-0,01 - 0)	p=0,539			
BOP							
W-3	**-0,06 (-0,48 - 0,39)**	**-0,05 (-0,27 - 0,07)**	**-0,08 (-0,2 - 0)**	p=0,64			
W-1	**-0,25 (-0,53 - -0,06)**	**-0,11 (-0,33 - 0,02)**	-0,02 (-0,18 - 0)	p=0,022	p=0,209	p=0,02	p=0,999
1-2	0,17 (-0,13 - 0,35)	0 (-0,07 - 0,09)	0 (0 - 0,08)	p=0,098			
2-3	0,14 (-0,08 - 0,46)	0,01 (-0,11 - 0,15)	0 (-0,12 - 0)	p=0,01	p=0,599	p=0,008	p=0,256
1-3	0,13 (-0,1 - 0,49)	0 (-0,11 - 0,18)	0 (-0,05 - 0)	p=0,01	p=0,378	p=0,008	p=0,408

W-3 Difference between baseline and after 6 months
W-1 Difference between baseline and after 2 weeks
1-2 Difference between testing at 2 weeks and 3 months
2-3 Difference between testing at 3 months and 6 months
1-3 Difference between testing at 2 weeks and 6 months

Table S6. Intergroup comparison of differences between studies of selected variables (CAL, PD, PI, BOP) – central segments.

	PERIO-ASTHMA	ASTHMA	CONTROL	ANOVA	Test U Mann-Whitney		
	n=40	n=40	n=40	Kruskal-Wallis	I/II	I/III	II / III
	Median (IQR)	Median (IQR)	Median (IQR)	α=0,05	α=0,017 (Bonferroni correction)		
CAL							
W-3	0 (-0,01 - 0,04)	0 (0-0)	0 (0-0)	p=0,577			
W-1	0(0-0)	0 (0-0)	0 (0-0)	P=0,999			
1-2	0 (-0,02 - 0,02)	0 (0-0)	0 (0-0)	p=0,91			
2-3	0 (0 - 0,02)	0 (0-0)	0 (0-0)	p=0,426			
1-3	0 (-0,02 - 0,04)	0 (0-0)	0 (0-0)	p=0,721			
PD							
W-3	**-0,15 (-0,39 - 0,03)**	**-0,08 (-0,22 - 0)**	-0,02 (-0,24 - 0,13)	p=0,091			
W-1	-0,13 (-0,26 - 0,03)	-0,04 (-0,18 - 0,07)	-0,02 (-0,1 - 0,07)	p=0,058			
1-2	0,09 (-0,1 - 0,27)	-0,02 (-0,09 - 0,12)	0,01 (-0,09 - 0,14)	p=0,373			
2-3	**-0,17 (-0,29 - 0,04)**	**-0,08 (-0,19 - 0)**	-0,06 (-0,16 - 0,06)	p=0,154			
1-3	-0,07 (-0,27 - 0,06)	-0,05 (-0,22 - 0,06)	-0,02 (-0,16 - 0,05)	p=0,771			
PI							
W-3	-0,12 (-0,43 - 0,37)	-0,03 (-0,25 - 0,08)	**-0,07 (-0,25 - 0)**	p=0,817			
W-1	**-0,3 (-0,63 - -0,06)**	-0,04 (-0,34 - 0,04)	**-0,02 (-0,23 - 0)**	p=0,011	p=0,059	p=0,015	p=0,999
1-2	**0,21 (-0,11 - 0,46)**	0 (-0,13 - 0,06)	0 (0 - 0,13)	p=0,036	p=0,035	p=0,355	p=0,999
2-3	0,05 (-0,11 - 0,51)	0 (-0,08 - 0,19)	0 (-0,1 - 0)	p=0,191			
1-3	**0,21 (0 - 0,46)**	0 (-0,16 - 0,15)	0 (0-0)	p=0,005	p=0,068	p=0,006	p=0,999
BOP							
W-3	**-0,09 (-0,22 - -0,01)**	**-0,03 (-0,16 - 0)**	0 (-0,02 - 0)	p=0,002	p=0,342	p=0,002	p=0,189
W-1	**-0,08 (-0,25 - 0)**	**-0,06 (-0,14 - 0,02)**	0 (-0,02 - 0)	p=0,006	p=0,993	p=0,006	p=0,1
1-2	0,03 (-0,07 - 0,12)	0 (-0,08 - 0,07)	0 (0-0)	p=0,495			
2-3	-0,03 (-0,15 - 0,09)	0 (-0,08 - 0,03)	0 (0-0)	p=0,508			
1-3	-0,02 (-0,13 - 0,11)	0 (-0,06 - 0,04)	0 (0-0)	p=0,629			

W-3 Difference between baseline and after 6 months
W-1 Difference between baseline and after 2 weeks
1-2 Difference between testing at 2 weeks and 3 months
2-3 Difference between testing at 3 months and 6 months
1-3 Difference between testing at 2 weeks and 6 months

Table S7. Intergroup comparison of differences between studies of selected variables (CAL, PD, PI, BOP) – lateral segments.

	PERIO-ASTHMA n=40 Median (IQR)	ASTHMA n=40 Median (IQR)	CONTROL n=40 Median (IQR)	ANOVA Kruskal-Wallis $\alpha=0,05$	I/II	I/III	II / III
						$\alpha=0,017$ (Bonferroni correction)	
CAL							
W-3	0 (-0,03 - 0,08)	0 (0-0)	0 (0-0)	p=0,834			
W-1	0(0-0)	0 (0-0)	0 (0-0)	P=0,466			
1-2	0 (-0,01 - 0,06)	0 (0-0)	0 (0-0)	p=0,322			
2-3	0 (-0,02 - 0,07)	0 (0-0)	0 (0-0)	p=0,522			
1-3	0 (-0,02 - 0,07)	0 (0-0)	0 (0-0)	p=0,88			
PD							
W-3	-0,1 (-0,32 - 0,17)	-0,06 (-0,19 - 0,06)	-0,05 (-0,18 - 0,08)	p=0,544			
W-1	-1,41 (-1,96 - -0,49)	-2,2 (-2,34 - -2,05)	-1,72 (-1,99 - -1,49)	p=0,0001	p=0,00001	p=0,00004	p=0,807
1-2	0,07 (-0,11 - 0,2)	-0,01 (-0,11 - 0,21)	-0,03 (-0,11 - 0,12)	p=0,494			
2-3	-0,02 (-0,21 - 0,09)	-0,04 (-0,18 - 0,09)	-0,05 (-0,12 - 0,03)	p=0,997			
1-3	0,02 (-0,19 - 0,26)	-0,01 (-0,19 - 0,16)	-0,03 (-0,1 - 0,01)	p=0,762			
PI							
W-3	-0,05 (-0,44 - 0,44)	-0,03 (-0,29 - 0,12)	**-0,06 (-0,19 - 0)**	p=0,464			
W-1	**-0,2 (-0,41 - 0)**	**-0,09 (-0,27 - 0)**	0 (-0,2 - 0)	p=0,187			
1-2	0,05 (-0,16 - 0,29)	0 (-0,04 - 0,15)	0 (0 - 0,06)	p=0,921			
2-3	0,08 (-0,06 - 0,36)	0 (-0,18 - 0,13)	**0 (-0,17 - 0)**	p=0,194			
1-3	0,07 (-0,05 - 0,49)	0,02 (-0,05 - 0,15)	0 (-0,12 - 0)	p=0,0008	p=0,805	p=0,0008	p=0,033
BOP							
W-3	**-0,1 (-0,22 - 0,03)**	**-0,06 (-0,13 - 0)**	**0 (-0,04 - 0)**	p=0,08			
W-1	-0,06 (-0,18 - 0,04)	**-0,05 (-0,08 - 0,01)**	0 (-0,02 - 0)	p=0,042	p=0,999	p=0,0607	p=0,147
1-2	0,01 (-0,09 - 0,09)	-0,01 (-0,07 - 0,09)	0 (0-0)	p=0,751			
2-3	-0,05 (-0,17 - 0,02)	-0,02 (-0,08 - 0,02)	0 (0-0)	p=0,959			
1-3	-0,04 (-0,16 - 0,06)	-0,02 (-0,08 - 0,02)	0 (-0,03 - 0)	p=0,495			

W-3 Difference between baseline and after 6 months
W-1 Difference between baseline and after 2 weeks
1-2 Difference between testing at 2 weeks and 3 months
2-3 Difference between testing at 3 months and 6 months
1-3 Difference between testing at 2 weeks and 6 months

Table S8. Comparison of differences between studies of levels of selected indicators between central and lateral sextants in group I (Perio - ASTHMA).

		central sextants			lateral sextants			
		Median	quartile 25%	quartile 75%	Median	quartile 25%	quartile 75%	Wilcoxon test (α = 0,05), p=
CAL								
	W-3	0,00	-0,01	0,04	0,00	-0,03	0,08	0,516
	W-1	0,00	0,00	0,00	0,00	0,00	0,00	0,999
	1-2	0,00	-0,02	0,02	0,00	-0,01	0,06	0,249
	2-3	0,00	0,00	0,02	0,00	-0,02	0,07	0,214
	1-3	0,00	-0,02	0,04	0,00	-0,02	0,07	0,259
PD								
	W-3	-0,15	-0,39	0,03	-0,10	-0,32	0,17	0,034
	W-1	-0,13	-0,26	0,03	-1,41	-1,96	-0,49	0,00001
	1-2	0,09	-0,10	0,27	0,07	-0,11	0,20	0,823
	2-3	-0,17	-0,29	0,04	-0,02	-0,21	0,09	0,0497
	1-3	-0,07	-0,27	0,06	0,02	-0,19	0,26	0,043
PI								
	W-3	-0,09	-0,22	-0,01	-0,05	-0,44	0,44	0,744
	W-1	-0,08	-0,25	0,00	-0,20	-0,41	0,00	0,372
	1-2	0,03	-0,07	0,12	0,05	-0,16	0,29	0,121
	2-3	-0,03	-0,15	0,09	0,07	-0,06	0,36	0,250
	1-3	-0,02	-0,13	0,11	0,07	-0,05	0,49	0,902
BOP								
	W-3	-0,12	-0,43	0,37	-0,10	-0,22	0,03	0,861
	W-1	-0,30	-0,63	-0,06	-0,06	-0,18	0,04	0,139
	1-2	0,21	-0,11	0,46	0,01	-0,09	0,09	0,791
	2-3	0,05	-0,11	0,51	-0,05	-0,17	0,02	0,418
	1-3	0,21	0,00	0,46	-0,04	-0,16	0,06	0,322

W-3 *Difference between baseline and after 6 months*
W-1 *Difference between baseline and after 2 weeks*
1-2 *Difference between testing at 2 weeks and 3 months*
2-3 *Difference between testing at 3 months and 6 months*
1-3 *Difference between testing at 2 weeks and 6 months*

Table S9. Comparison of differences between studies of levels of selected indicators between central and lateral sextants in group II (ASTHMA).

		central sextants			lateral sextants			
		Median	quartile 25%	quartile 75%	Median	quartile 25%	quartile 75%	Wilcoxon test (α = 0,05), p=
CAL								
	W-3	0,00	0,00	0,00	0,00	0,00	0,00	0,028
	W-1	0,00	0,00	0,00	0,00	0,00	0,00	0,999
	1-2	0,00	0,00	0,00	0,00	0,00	0,00	0,183
	2-3	0,00	0,00	0,00	0,00	0,00	0,00	0,075
	1-3	0,00	0,00	0,00	0,00	0,00	0,00	0,028
PD								
	W-3	-0,08	-0,22	-0,00	-0,06	-0,19	0,06	0,100
	W-1	-0,04	-0,18	0,07	-2,20	-2,34	-2,05	0,0000001
	1-2	-0,02	-0,09	0,12	-0,01	-0,11	0,21	0,135
	2-3	-0,08	-0,19	0,00	-0,04	-0,18	0,09	0,236
	1-3	-0,05	-0,22	0,06	-0,01	-0,19	0,16	0,014
PI								
	W-3	-0,03	-0,16	0,00	-0,03	-0,29	0,12	0,717
	W-1	-0,06	-0,14	0,02	-0,09	-0,27	0,00	0,862
	1-2	0,00	-0,08	0,07	0,00	-0,04	0,15	0,192
	2-3	0,00	-0,08	0,03	0,00	-0,18	0,13	0,274
	1-3	0,00	-0,06	0,04	0,02	-0,05	0,15	0,446
BOP								
	W-3	-0,03	-0,25	0,08	-0,06	-0,13	0,00	0,960
	W-1	-0,04	-0,34	0,04	-0,05	-0,08	0,01	0,442
	1-2	0,00	-0,13	0,06	-0,01	-0,07	0,09	0,437
	2-3	0,00	-0,08	0,19	-0,02	-0,08	0,02	0,606
	1-3	0,00	-0,16	0,15	-0,02	-0,08	0,02	0,460

W-3 Difference between baseline and after 6 months
W-1 Difference between baseline and after 2 weeks
1-2 Difference between testing at 2 weeks and 3 months
2-3 Difference between testing at 3 months and 6 months
1-3 Difference between testing at 2 weeks and 6 months

Table S10. Comparison of differences between studies of levels of selected indicators between central and lateral sextants in the control group.

		central sextants			lateral sextants			Wilcoxon test
		Median	quartile 25%	quartile 75%	Median	quartile 25%	quartile 75%	(α = 0,05), p=
CAL								
	W-3	0,00	0,00	0,00	0,00	0,00	0,00	0,047
	W-1	0,00	0,00	0,00	0,00	0,00	0,00	0,999
	1-2	0,00	0,00	0,00	0,00	0,00	0,00	0,051
	2-3	0,00	0,00	0,00	0,00	0,00	0,00	0,638
	1-3	0,00	0,00	0,00	0,00	0,00	0,00	0,086
PD								
	W-3	-0,02	-0,24	0,12	-0,05	-0,18	0,08	0,595
	W-1	-0,02	-0,10	0,07	-1,72	-1,99	-1,49	0,000001
	1-2	0,01	-0,09	0,14	-0,03	-0,11	0,12	0,727
	2-3	-0,06	-0,16	0,06	-0,05	-0,12	0,03	0,962
	1-3	-0,02	-0,16	0,05	-0,03	-0,10	0,01	0,554
PI								
	W-3	0,00	-0,02	0,00	-0,06	-0,19	0,00	0,310
	W-1	0,00	-0,02	0,00	0,00	-0,20	0,00	0,548
	1-2	0,00	0,00	0,00	0,00	0,00	0,06	0,371
	2-3	0,00	0,00	0,00	0,00	-0,17	0,00	0,043
	1-3	0,00	0,00	0,00	0,00	-0,12	0,00	0,162
BOP								
	W-3	-0,07	-0,25	0,00	0,00	-0,04	0,00	0,327
	W-1	-0,02	-0,23	0,00	0,00	-0,02	0,00	0,191
	1-2	0,00	0,00	0,13	0,00	0,00	0,00	0,900
	2-3	0,00	-0,10	0,00	0,00	0,00	0,00	0,060
	1-3	0,00	0,00	0,00	0,00	-0,03	0,00	0,013

W-3 Difference between baseline and after 6 months
W-1 Difference between baseline and after 2 weeks
1-2 Difference between testing at 2 weeks and 3 months
2-3 Difference between testing at 3 months and 6 months
1-3 Difference between testing at 2 weeks and 6 months

Table S11. Intergroup comparison of differences between clinical indices between lateral and medial segments.

	Perio-ASTHMA			ASTHMA			CONTROL			Anova Kruskal Wallis	U Mann-Whitney α=0,017 (Bonferroni)		
	Median	Q25%	Q75%	Median	Q25%	Q75%	Median	Q25%	Q75%	α=0,05	I/II	I/III	II/III
Baseline													
CAL(L–C)	0,623	0,000	1,106	0,000	0,000	0,055	0,000	0,000	0,161	0,0006	0,0016	0,0113	0,9999
PD(L–C)	0,155	0,001	0,287	0,160	0,114	0,248	0,132	0,055	0,253	0,7149			
PI(L–C)	-0,027	-0,358	0,297	0,043	-0,181	0,219	0,000	-0,027	0,115	0,6173			
BOP(L–C)	-0,028	-0,166	0,042	0,002	-0,043	0,068	0,000	0,000	0,021	0,2007			
Examination 1													
CAL(L–C)	0,637	0,029	1,184	0,000	0,000	0,055	0,000	0,000	0,161	0,0010	0,0003	0,0042	0,9999
PD(L–C)	0,131	-0,046	0,375	0,119	0,055	0,276	0,177	0,052	0,247	0,8967			
PI(L–C)	0,000	-0,169	0,160	0,032	-0,063	0,172	0,000	-0,010	0,052	0,7947			
BOP(L–C)	-0,016	-0,079	0,075	0,023	-0,026	0,067	0,000	0,000	0,019	0,3108			
Examination 2													
CAL(L–C)	0,584	0,041	1,155	0,000	0,000	0,047	0,000	0,000	0,179	0,0001	0,0001	0,0022	0,9999
PD(L–C)	0,196	-0,013	0,347	0,173	0,071	0,294	0,125	0,047	0,225	0,5509			
PI(L–C)	-0,129	-0,348	0,106	0,065	0,000	0,203	0,000	0,000	0,052	0,0051	0,0045	0,8171	0,1136
BOP(L–C)	-0,017	-0,088	0,050	0,000	-0,023	0,034	0,000	0,000	0,000	0,2799			
Examination 3													
CAL(L–C)	0,611	0,069	1,149	0,000	0,000	0,039	0,000	0,000	0,161	0,0001	0,0001	0,0019	0,9990
PD(L–C)	0,254	0,104	0,421	0,208	0,109	0,377	0,140	0,050	0,279	0,1012			
PI(L–C)	0,000	-0,125	0,166	0,038	-0,010	0,147	0,000	-0,036	0,000	0,0233	0,9999	0,2548	0,0238
BOP(L–C)	-0,024	-0,096	0,023	0,003	-0,022	0,048	0,000	0,000	0,000	0,0193	0,0234	0,1669	0,9999

Result > 0 means higher index in lateral segment than in central segment
Result = 0 means no difference between segments
Result <0 means higher index in center segment than in lateral segment