The American Journal of Medical Sciences and Pharmaceutical Research (ISSN – 2689-1026)
VOLUME 05 ISSUE 05 Pages: 30-36
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

Journal Website: https://theamericanjournals.com/index.php/tajmspr

Research Article

SPESEFIC CHANGES IN SALIVA CONTENT IN ORAL SOFT TISSUE LESIONS IN YOUNG SCHOOL-AGED CHILDREN

Submission Date: May 14, 2023, Accepted Date: May 19, 2023,
Published Date: May 24, 2023 |
Crossref doi: https://doi.org/10.37547/TAJMSPR/Volume05Issue05-08

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ABSTRACT

The high level of dental morbidity of the child population remains an urgent general medical and social problem. It is known that dental caries and its complications, being chronic foci of oral infection, can lead to premature tooth loss, as well as contribute to the development of focal-conditioned diseases. At the same time, despite the active development of therapeutic measures for patients with dental caries, some problems of its prevention remain unresolved. It should be noted that knowledge of the quantitative and qualitative characteristics of the composition and properties of mixed saliva in school-age children is important in improving the effectiveness of preventive measures. It should be noted that dental caries has a polyfactorial genesis, which is associated with the aggressive effects of exogenous and endogenous factors.

KEYWORDS

Saliva trace elements, leukocytes, Imudon.

INTRODUCTION

In the literature, taking into account the information about the importance of violations of enzymatic metabolism in saliva in the pathogenesis of various inflammations and destructive ulcers in the oral

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mucosa (Dolgiks V.T., Matusov I.E., Chesnokov V.I., Saladovnikov N.I., Korpacheva O.V., 2000), we studied the main listed indicators of enzymatic metabolism in patients with soft tissue injuries of the oral cavity. Taking into account the information presented in the literature on the importance of not only the enzyme, but also violations of the content of trace elements, especially calcium and phosphorus, in the genesis of inflammatory and destructive diseases of the oral mucosa, we note that the use of imudone is complex and separate under the influence of the observed use, we studied their amount in the mixed saliva of patients.

Purpose of study: Study of changes in oral fluid during complex treatment with Imudon.

MATERIALS AND METHODS

The study was conducted among 160 patients from ages 6 to 12. The results of a cytological study of saliva for assessing inflammatory-destructive pathology of the oral mucosa are of great importance as it is the main component of the oral fluid, which provides gastric activity of the oral mucosa and responds to various pathological inflammations that develop in the oral cavity, as well as other systems. For this reason we studied the main markers of inflammation in the saliva of patients in the aspect of comparison (epithelial cells and leukocytes) under the influence of complex administration when using the drug Imudon.

In the examined patients the microelement, expressed in the initial state, was observed as an admixture in the composition, which was associated with a significant decrease in the level of calcium against the background of a significant increase in phosphorus in the mixed saliva.

Under the influence of various methods of treatment, an analysis of the change in the index of the studied microelements showed that when using the drug Imudon, a positive effect was observed in the saliva of patients, more pronounced in the composition of the microelement, such as the renewal of the amount of both phosphorus and calcium to the standard values, which were not observed in the additive group B in the composition of mixed saliva according to the content of microelements. The results achieved after 6 months were preserved only in the main group, although in the additional group the results obtained after treatment were not preserved, but they did not reach the initial result. The number of studied indicators in saliva after 6 months in the supplementation group did not differ from the initial level. As an illustrative example, we present Table 1.

Table 1.

The state of the content of trace elements in the saliva of patients with damage of the soft tissues of the oral cavity when using Imudon (in the main group)

Studied indicators	Unit of measurement	Norm	Before treatment n=40	After treatment n=40	
				Main n=20	Additional n=20

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pH		6,92±0,16	8,23±0,12	7,004±0,15	8,00±0,17
Calcium	Mmol/l	1,16±0,13	0,95±0,01	1,15±0,1	1,0±0,002
Phosphorus	Mmol/l	4,13±0,13	6,4±0,2	4,07±0,2	5,8±0,02
Sodium	Mmol/l	30,36±7,53	42,1±0,2	34,32±3,57	40,8±0,2
Potassium	Mmol/l	37,25±7,39	48,45±1,3	40,76±5,0	45,14±4,3
Chlorides	Mmol/l	20,53±1,87	25,64±1,54	21,4±0,6	23,54±1,43
Magnesium	Mmol/l	0,232±0,033	0,09±0,04	0,21±0,02	0,15±0,02
Protein	Mg/l	4,12±0,59	5,96±1,23	4,30±0,20	5,5±1,9
Urea	Mmol/l	2,19±0,28	4,10±0,3	2,2±0,15	3,5±0,4
Uric acid	µmol/l	101,1±21,7	150,2±25,0	120,6±2,8	140,2±10,6
Cholesterol	Mmol/l	0,103±0,023	0,120±0,03	0,105±0,02	0,115±0,02
Triglycerides	Mmol/l	0,103±0,097	0,106±0,05	0,104±0,04	0,105±0,04
Glucose	Mmol/l	0,071±0,013	0,05±0,02	0,068±0,01	0,06±0,01
Bilirubin	Mmol/l	5,40±2,34	8,56±2,2	6,6±2,2	7,8±3,2
thymol test		0,86±0,30	0,95±0,20	0,88±0,2	0,93±0,04
Amylase	E/l	714±92	512±15	650±25	521,2±24
Albumen	Mmol/l	0,880±0,303	0,65±0,02	0,85±0,09	0,70±0,81
Iron	µmol/l	14,85±5,58	24,5±6,43	18,43±2,43	22,65±4,23
AlAt	E/l	14,06±7,47	25,2±5,58	20,05±2,2	23,4±2,6

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AsAT	E/l	24,13±7,18	34,9±4,36	29,32±2,3	30,14±5,23

The obtained results are shown in Table 1 and also indicate the need for prophylactic courses using the Imudon preparation to prevent the recurrence of the disease after 6 months, since during this period the barrier function of the oral mucosa decreases due to undeveloped metabolic activity (Long V.T. Magusov I.E., Chesnokov V.I., Solodovnikov N.I., Korpacheva O.V., 2000).

RESEARCH RESULTS

The results of the research are presented in tables 2 and 3.

As can be seen from the data in Table 2, it is observed that in the initial case of patients who underwent an increase in the number of epithelial cells in saliva by 3.8 times was recorded, which indicates the presence of moderate activity of an inflammatory-destructive nature.

After 5 procedures of the treatment complex, which included the sequential use of the Imudon preparation, a pronounced decrease in the number of epithelial cells in saliva (by 2.9 times) was observed, but, nevertheless, their number was still significantly different. In the additional group, although there was a significant decrease in the number of epithelial cells in saliva (by 2.2 times), their level during this period was 2.0 times higher than in patients of the main group.

During this period, a decrease in the number of epithelial cells in saliva was noted, which is also significant in the supplement group, but less significant compared to the previous groups, which was confirmed by the fact that their number is 3.5 times higher.

After the course of treatment, a positive change in the cytological index in the saliva of the affected patients was additionally expressed and was characterized by a moderate quantitative composition of epithelial cells in the saliva of the main group of patients, the results obtained were maintained throughout the entire observation period (up to 6 months).

In the main group, the positive dynamics also became more pronounced, but the quantitative indicator of epithelial cells in saliva was still 1.8 times higher than the normative values, unstable, and after 6 months it significantly increased to 3.1 but did not reach the initial level.

Although in the main group after the course of treatment, significant changes in the number of epithelial cells were more pronounced, they were significantly inferior to the results achieved in the main group and in the additional group.

Table 2.

The effect of complex usage of preparation Imudon is shown as a change in the number of epithelial cells in the saliva of patients with damage of the soft tissues of the oral cavity

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Study period	Treatment methods	
	Main (n=20)	Additional (n=20)
Norm	1,7±0,08	
Initial score	6,4±0,2	
After 5 procedures	2,2±0,11	4,1±0,24
After treatment	1,73±0,1	3,1±0,13
After 1 month	1,76±0,2	3,6±0,21
After 6 months	1,8±0,23	4,3±0,12

Changes in the number of epithelial cells in the saliva of patients with damage of the soft tissue injuries under the influence of various methods of treatment

It is known that local leukocytosis are also a marker of local inflammatory activity, for this reason we also observed in cytological studies in patients which studied its expression in saliva.

The results of the cytological study are presented in table 3.

Table 3

Changes in the number of leukocytes in the saliva of patients with damage of the soft tissues of the oral cavity when using Imudon.

Study period	Treatment methods	
	Main (n=20)	Addition (n=20)
Norm	0,8±0,02	
Initial score	4,2±0,4	
After 5 procedures	1,6±0,04	1,6±0,04
After the treatment course	0,7±0,03	0,7±0,03
After 1 month	0,8±0,06	0,8±0,06
After 6 months	0,9±0,07	0,9±0,07

CONCLUSION

As can be seen from the data presented in Table 3, in the initial case, moderate leukocytosis is detected, which is 5.3 times higher than the normal values in the saliva of patients who have been touched, which confirms the presence of an active inflammatory-destructive nature in the oral cavity. An analysis of the

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effect of various methods of treatment on the number of leukocytes in the saliva of patients with soft tissue injuries showed a rapid and significant cessation of local inflammation as a result of the consistent use of imudon, the number of leukocytes was expressed in a 2.5-fold decrease compared to the previous treatment. initial level after 5 procedures.

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