



FEATURES OF PLATELET MORPHOLOGY IN PATIENTS WITH SIALOSIS

Jumayev L. R.

Bukhara State Medical Institute

Hamrayev S. J.

Bukhara State Medical Institute

Resume

Various methods of diagnosing diseases of the salivary glands do not fully meet the requirements of doctors to make a final decision on the choice of treatment for various diseases of the salivary glands, as result of which patients receive untimely or inadequate care. In these cases, the long course of the disease leads to the development of complications, the treatment of which presents significant difficulties. Therefore, a thorough collection of anamnesis and a comprehensive examination of patients with sialosis are a prerequisite for making a final diagnosis.

Keywords: salivary glands, sialoses, oral fluid, platelets.

The endothelial layer, which is in constant contact with the liquid fractions, receives signals received by the humoral route. Endothelial cells closely interact with platelets entering the parietal layer of the bloodstream, stabilize them, replenishing the reserves of arachidonic acid, serotonin, growth factors and other biologically active substances [2,4,8,12]. The endothelium also controls the platelet link of the hemostatic system. Prostacyclin produced by the endothelium prevents platelet aggregation, promotes the restoration of their discoid shape, inability to contact. With vascular endothelial cell dysfunction, the subendothelium (collagen structures, smooth muscle cells) is exposed [1,7,11,12]. Contact with collagen activates platelets, resulting in their spreading and adhesion. Platelet activation is extremely unfavorable in various pathological conditions [3,5].

The aim of the study is to study the morphology of platelets in patients with sialosis and determine their diagnostic significance.

Material and methods. In the department of Maxillo-facial surgery in the Bukhara regional Multidisciplinary Center, for the period 2017-2018, 41 patients with destructive diseases of the salivary glands were admitted. The age of the patients





ranged from 18 to 62 years. Men - 21 (33.8%), women - 41 (66%). In our work, we used the classification of I. F. Romacheva (1987).

The distribution of patients by age, sex, presence of concomitant pathology, clinical form and severity of the disease was homogeneous ($p < 0.05$). All the observed patients were subjected to clinical and laboratory research methods. We investigated complaints and carefully collected anamnesis. When clarifying complaints, the following were established: the nature of pain, its localization, connection with food intake, radiation. When examining patients, attention paid to the presence of edema and infiltration in the salivary glands, to the color of the skin in the area of the inflamed salivary gland, to the condition of the oral mucosa, to the nature and amount of secreted secretions from the salivary gland ducts.

In all the examined patients, the number of platelets in the capillary blood in the Goryaev chamber was calculated. Intravascular platelet activity (IPA) was determined visually using a Shitikova phase contrast microscope.

Results and discussion. Analysis of the morphological structure of platelets revealed the features of their shape and number. The state of thrombocytopenia accompanied by the appearance of activated forms in the bloodstream (spherocytes, discoechinocytes and spheroechinocytes).

Table 1 Indicators of platelet morphology in patients with sialosis

Indicator	Comparison group, n=***	Patients with sialosis n=***
Discoocytes, %	85,4±1,21	69,1±4,21*
Discoechinocy %	11,4±0,32	25,4±1,71*
Spheroechinocytes, %	1,54±0,11	3,04±0,13*
Spherocytes, %	1,51±0,12	2,46±0,23*
Platelets, $1 \cdot 10^9 / \mu$	256,0±11,32	180,0±8,71*
Activated blood platelets, %	12,41±0,23	15,66±1,26*

Note: * - differences relative to the comparison group are significant $P < 0.05$

As can see from the presented research results (Table.1) patients showed a significant decrease in the percentage of discoocytes in the blood by an average of 19%.

A decrease in the normal forms of platelets (discoocytes) accompanied by an increase in the pathological forms of blood platelets. The study showed that the number of discoechinocytes (a pathological form of platelets) that initiate intravascular thrombosis significantly increases in patients.



In the patients, the number of these cells was on average 2.2 times greater than in the comparison group. A different dynamics observed with respect to the percentage of spherocytocytes. The number of spherocytocytes in patients with sialosis was equal to $3.04 \pm 0.13\%$; in healthy individuals $-1.54 \pm 0.11\%$, which is 2 times ($P < 0.001$) higher than the initial values.

Thus, in patients with sialosis, against the background of vascular endothelial cell dysfunction, there is not only a quantitative, but also a qualitative change in the blood plates. At the same time, the decrease in the content of normal forms of discocytes accompanied by an increase in the number of discocytocytes, spherocytocytes and spherocytes. Flattening of platelets and increasing their adhesive properties to the subendothelium in vascular endothelial cell dysfunction in MS patients entails their activation and aggregation and a cascade of interaction between platelets and plasma factors of the blood clotting system. During platelet adhesion and aggregation, ADP, serotonin, and other factors secreted from the dense granules of the blood platelets. Platelet aggregation, by changing the structure of the cell membrane, organizes the receptor complex of glycoproteins e GPIIb/IIIg.

The detection of this receptor is one of the reasons for the increased platelet aggregation activity and determined by the reaction of fibrinogen with thrombospondin. The conglomerate of blood plate cells fixed by filaments of fibronectin, synthesized by endotheliocytes and platelets, and fixes it with the fibrillum of the connective tissue matrix. At the beginning, the resulting fibrin conglomerates have a simple shape, they have little effect on the patency of blood vessels, but with transverse growth under the influence of plasma factors and with a high vasospasm potential, under the influence of vasoactive substances, there is a risk of fragment separation and embolization.

As mentioned above, an increase in the number of structurally altered platelets, in particular discocytocytes, in patients indicates the initiation of the cellular link of the hemostatic system. Activated platelets increased to $15.66 \pm 1.26\%$ versus $12.41 \pm 0.23\%$ in the comparison group, i.e. by 1.5 times ($P < 0.05$).

Conclusions

Thus, the activation of platelet-vascular hemostasis and endothelial cells in the examined individuals accompanied not only by changes in the morphological picture of platelets, but also by the activation of blood platelets, which leads to a violation of microcirculation.





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