

REVITALIZATION OF NONSPECIFIC IMMUNITY FACTORS IN PATIENTS WITH DIFFUSE PHLEGMON OF THE MAXILLOFACIAL AREA USING A BAKTERIOPHAGE

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✓ *Resume,*

In the present article results of treatment of patients with generalised odontogen flegmons maxilla facial region are resulted. Patients have been divided into 2 groups. Results of two ways of treatment are compared. Traditional treatment did not lead to positive dynamics of key parametres nonspecific immunological protection at patients with generalised odontogen flegmons maxilla facial region. Application of complex treatment in which structure there was Bakteriofag, possessed immunomodulating, medical action. Bakteriofag the effective eliminated infringements in system nonspecific immunological resistance, it possessed also regeneration-reparation action at patients generalised odontogen flegmons maxilla facial region.

Key words: odontogen flegmons, nonspecific protection, maxilla facial region, reparative procession

АКТИВИЗАЦИЯ НЕСПЕЦИФИЧЕСКИХ ФАКТОРОВ ИММУНИТЕТА У БОЛЬНЫХ С РАЗЛИТЫМИ ФЛЕГМОНАМИ ЧЕЛЮСТНО - ЛИЦЕВОЙ ОБЛАСТИ С ПОМОЩЬЮ БАКТЕРИОФАГА

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✓ *Резюме,*

В настоящей статье приводятся результаты лечения больных разлитыми одонтогенными флегмонами челюстно - лицевой области (далее ЧЛО).

Больные были разделены на 2 группы. Сравниваются результаты двух способов лечения. Традиционное лечение не приводило к положительной динамике основных параметров неспецифической иммунологической защиты у больных с разлитыми одонтогенными флегмонами ЧЛО.

Применение комплексного лечения, в составе которого был Бактериофаг, обладало противовоспалительным, иммуномодулирующим, лечебным действием. Бактериофаг эффективно устранял нарушения в системе неспецифической иммунологической резистентности, он обладал также регенерационно-репаративным действием у больных разлитыми одонтогенными флегмонами ЧЛО.

Ключевые слова: одонтогенные флегмоны, неспецифическая резистентность, челюстно - лицевая область, репаративный процесс.

ЮЗ-ЖАҒ СОҲАСИ ТАРҚАЛГАН ФЛЕГМОНАЛАР БИЛАН КАСАЛЛАНГАН БЕМОРЛАРДА БАКТЕРИОФАҒ ЁРДАМИДА НЕСПЕЦИФИК ИММУН ОМИЛЛАРИНИ ФАОЛЛАШТИРИШ

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Ушбу мақолада юз - жағ соҳаси тарқалган одонтоген флегмоналар билан касалланган беморларнинг даволаш натижалари келтирилган.

Беморлар икки гуруҳларга бўлинган. Даволаш икки хил усулларнинг натижалари таққослаштирилди. Юз - жағ соҳаси тарқалган одонтоген флегмоналар билан касалланган беморларнинг анъанавий даволашда неспецифик иммунологик ҳимоясидаги асосий параметрларнинг мусбат динамикаси кузатилмади.

Бактериофаг ёрдамидаги комплекс даволаш ялғизлишига қарши, иммуномодуляцияланган ва даволовчи таъсирни кўрсатади. Бактериофаг неспецифик иммунологик резистентлик тизимидаги бузилишларни юқори самараси билан йўқотиб, шу билан бирга юз - жағ соҳаси тарқалган одонтоген флегмоналар билан касалланган беморларда регенерацион - репаратив таъсирни кўрсатади.

Калит сўзлар: одонтоген флегмоналар, неспецифик резистентлик, юз - жағ соҳаси, репаратив жараён

Introduction

Prevention and treatment odontogenic inflammatory diseases of the maxillofacial area (MFA) are one of the basic problems in surgical dentistry right now. In recent years, there has been a trend towards an increase in the number of patients with odontogenic inflammatory diseases of the MFA, the big percent of complications and lethal outcomes are marked a tendency to growth of number of patients with odontogenic inflammatory diseases of the MFA, to their distribution on some next anatomic areas.

In this connection search of methods of increase of efficiency of treatment of patients with odontogenic inflammatory diseases of the MFA is constantly led, new technologies of drug treatment of this nosology are developed and implemented in practice.

Found that in patients with odontogenic inflammatory diseases of the MFA especially at their distribution and development of complications, immunity suppression, mainly the T-cellular pool is marked. In this regard, the inclusion in the complex of medical preparations is

justified, possessing immunomodulatory effect [8-10] quite proved.

In the literature report the use of application of Bakteriophage at various pathologies at adults and children, however preparation influence at treatment of patients with odontogenic inflammatory diseases of the MFA and in prevention of their complications still not studied.

The purpose: study of the effect of Bakteriophage as part of complex treatment on nonspecific immune reactivity in patients with odontogenic inflammatory diseases of the MFA.

Materials and methods

On chair of surgical dentistry in department of maxillofacial surgery of the Bukhara region versatile medical centre we surveyed 60 patients with odontogenic inflammatory diseases of the MFA, at the age of 17-62 years. From them 33 were with phlegmons of two areas, 27 - with phlegmons of three areas. Control group for comparison has constituted 21 identical age almost healthy the person which was in a range from 17 until 62 years.

In table, 1- distribution of patients on a floor and age presented.

Table - 1.

№		from 20 y	20-29	30-39	40-49	50 and older	total
1	female	6	12	11	6	4	39 (65,0 %)
2	male	4	5	9	3	0	21 (35,0 %)
3	In total	10	17	20	9	4	60 (100%)

All patients hospitalized under emergency indications.

For diagnostics odontogenic inflammatory diseases of the MFA and a choice of an optimum method of treatment by all patient have conducted clinical (collection of the anamnesis, complaints, external survey of maxillofacial area and an oral cavity), neurologic, radiological, laboratory methods of research.

Depending on the conducted treatment, all patients have been broken on II groups:

I group - 22 patients with odontogenic inflammatory diseases of the MFA at which traditional (drugs) treatment had conducted;

II group - 38 patients with odontogenic inflammatory diseases of the MFA, at which against traditional treatment in addition appointed oral acceptance of Bakteriophage (on 20 ml of 3 times a day within 7 days).

In treatment of patients with odontogenic inflammatory diseases of the MFA, we used traditional drugs therapy, which included antibiotics, sulfa drugs, entering desensitizing drugs, analgesics.

For research of indicators of nonspecific resistance, we at patients produced a blood sampling from an elbow vein in volume of 10 ml, stabilized with 3,8 % solution

sodium citrate, further centrifuged 8000 about/m during the 10 minutes Complement components of C3 and ceruplasmin investigated by immunechemical method on an analyzer of "Cofas Emira" by company "ROSh" (Switzerland). The obtained data expressed in ME/ml and mg/dl. Reagent kits used in work were providing by the "ROSh" (Switzerland).

For research of circulating immune complexes (CIC), used 7,0 % solution of polyethylene glycol - 5000. Results expressed in arbitrary units (Xaskova et. al., 1978).

The level of average molecular peptides (AMP) in the blood determined by the Gabrielyan A.I. methods (1981), and values expressed in arbitrary units.

Received digital indicators have subjected to statistical handling by means of a packet of applied programs.

Results and discussion: traditional treatment (table 2) was shown that level AMP both to, and after treatment authentically exceeded background level of control group in more than 2 times. AMP content decreased at the end of treatment ($p < 0,05$). High values of level AMP testified about adverse development of pathological process as they possess toxicity and reduce thereby local resistance in organisms of patients with diffuse phlegmons of the MFA.

Table 2.

Indicators of nonspecific resistance in patients with diffuse phlegmons of the MFA in dynamics of traditional treatment ($M \pm m$).

Indicators	Healthy persons	Traditional treatment			
		Upon admission to the clinic	Days after operation		
			3 day n=8	5-7 day n=7	12-14 day n=7
AMP (ar u.)	0,27±0,06	0,59±0,06***	0,63±0,04***	0,58±0,05***	0,44±0,03*
CIC (ar u.)	39,1±2,4	78,0±5,11***	81,0±7,12***	85,0±6,55***	79,0±5,96
Complement of C ₃ (mg/dl)	124,6±8,9	68,9±2,13***	63,1±3,01***	64,6±4,21***	78,1±5,61***
Ceruplasmin (mg/dl)	24,5±0,41	39,6±0,51***	41,3±0,46***	38,9±0,44***	37,1±0,52***
PhAN (%)	27,6±0,61	38,4±1,38***	39,1±0,87***	38,3±0,93***	37,4±0,97***

Note: * - $p < 0,05$; ** - $p < 0,01$; *** - $p < 0,001$ compared to the controller.

Influence AMP on functional activity of leukocytes judged on their change phagocytes activity of neutrophils (PhAN). Parameters the FAN under test NTC it is statistically authentic (in 1,4 times) surpassed initial level of healthy persons and practically did not change in dynamics of treatment.

It is necessary to allocate that in forming of the difficult mechanism non-specific immunological protection of an organism against an infectious agent crucial role played by system of complement components, in particular C3. At patients oppression of the given parameter from 0,5 to 0,6 times was noticed that, apparently, occurred due to "their

increased consumption" the CIC against the background of a purulent inflammatory process. CIC level has at the average increased in more, than 2 times and had no tendency to decrease in the course of traditional treatment.

Low complement of C3 values, the CIC responsible for immune sticking and chemotaxis, promotes exocytose of neutrophil granules and secretions secretion of lysosomal hydrolases. The latter is likely to increase the content of CIC and synthesis of parameter of a acute phase of an inflammation - ceruplasmin.

Tissue alteration with disintegration of cages in the course of an inflammation leads to increase ceruplasmin that strengthens activation lysosomal complex of neutrophils. Under the influence of the CIC which level has increased in 2 times at patients with odontogenic inflammatory diseases of the MFA, lysosomal enzymes are released from neutrophils. While CIC can also activate cells carriers of mediators, inducing acute inflammatory process for which acute increase of permeability of vessels, neutrophil infiltration, damage to the vascular wall to its fibrinoid necrosis, fibrin dropping and thrombus formation. The numerous researches which have been conducted during last decade, have distinctly shown that on a clinical current inflammatory diseases and a condition reparative processes considerable influence have regulatory mechanisms of immune reactions, as a function of immune-competent

cells, cytokine production, pathogen production level immune complexes and adhesive molecules. All this effects of immunity successfully control the Bakteriophage

We investigated the effect of Bakteriophage in the dynamics of treatment in patients with diffuse phlegmons of the MFA. Data is presented in table of 3.

The received results testified to conclusive advantage of application of a preparation of Bakteriophage as the method positively influencing as on dynamics of the basic indicators at patients with diffuse phlegmons of the MFA, and the factor oppressing inflammatory process and simultaneously with it accelerating reparative and rehabilitation processes. Complex treatment with application of Bakteriophage has allowed to lower considerably concentration AMP (in 2 times), and CIC level - in 2,3 times. We observed stabilization of these indicators in the end of treatment.

At the level analysis complement of C3 it is possible to note its steady increasing in dynamics of treatment and achievement of its maximum size by the treatment end - 101,6 + 5,62 mg/dl (p <0,05).

Low level the PhAN is the important criterion, testifying to a favorable current of purulent inflammatory process at patients with diffuse phlegmons of the MFA while there is a decrease in necrotic cells and in parallel with it concentration of ceruplasmin decreased for 64 %.

Table 3.

Indicators of nonspecific resistance at patients with diffuse phlegmons of the MFA in dynamics of treatment (M±m)

Indicators	Healthy persons	Complex treatment using of Bakteriophage			
		Upon admission to the clinic	Days after operation		
			3 day n=8	5-7 day n=7	12-14 day n=7
AMP (ar u.)	0,27±0,06	0,59±0,06***	0,43±0,04*	0,31±0,02	0,29±0,02
CIC (ar u.)	39,1±2,4	78,0±5,11***	51,0±4,33	39,0±4,45	34,6±3,11
Complement of C ₃ (mg/dl)	124,6±8,9	68,9±2,13***	76,9±3,34*	84,7±3,01***	101,6±5,62*
Ceruplasmin (mg/dl)	24,5±0,41	39,6±0,51***	33,4±0,33***	29,7±0,27***	25,0±0,21
PhAN (%)	27,6±0,61	38,4±1,38***	31,4±0,83***	29,3±0,56*	28,6±0,51

Note: * - p<0,05; ** - p<0,01; *** - p<0,001 compared to the controller

In patients with diffuse phlegmons of the MFA deep damaged to nonspecific resistance occurred. Traditional methods of treatment did not lead to positive dynamics of the basic indicators non-specific immunological protection at patients with diffuse phlegmons of the MFA. Application of complex therapy with additional inclusion in its railroad train of Bakteriophage possessed the big efficiency so it promoted normalization of the basic indicators of nonspecific resistance, increased regenerative-reparative processes, possessed immunomodulatory and therapeutic effect in patients with diffuse phlegmons of the MFA.

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