

АБДОМИНАЛ ТРАВМАНИНГ АСОРАТЛИ КЕЧИШИДА ИММУНОЛОГИК ДАСТЛАБКИ ШАРТЛАР

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ИММУНОЛОГИЧЕСКИЕ ПРЕДПОСЫЛКИ ОСЛОЖНЕННОГО ТЕЧЕНИЯ АБДОМИНАЛЬНОЙ ТРАВМЫ

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Мақолада қорин бўшлиғи травмаларининг асоратли кечиши сабабларини организмда иммунологик ўзгаришлар билан мос равишда булиши мумкинлигини кўрсатилган.

Калит сўзлар: *абдоминал травма, асоратлар, иммунологик ўзгаришлар.*

Статья представляет собой анализ причин травмы живота с осложненным течением в соответствии с иммунологическими изменениями, которые могут быть причиной.

Ключевые слова: *абдоминальная травма, осложнения, иммунологические изменения.*

System immunological surveillance allocated as a leading position in the processes of pathological conditions. In patients with abdominal trauma with low phagocytosis level, reduced synthesis of antibodies, increased production of T-suppressor, cytokine dysregulation is one manifestation of complications in post trauma period. Average level of pro inflammatory cytokines in plasma increased in patients with uncomplicated post-traumatic period, although in the case of systemic inflammatory response syndrome and endogenous intoxication this level increases 10 times or more. Compensatory reactions can lead to the development of countervailing changes - from episodic syndromes to dangerous critical states. Therefore, in patients with abdominal trauma is important to determine violations of immunological reactivity, especially in the case of complications. Immunological studies conducted in 90 patients with varying severity of abdominal trauma and its complications. Immunological parameters are defined for identify patterns of post-traumatic complications in the postoperative period and confirmed the effectiveness of the proposed algorithm. To determine the initial level of performance indicators the benchmarks there was used the control group: phagocytic index $65,14 \pm 3,48\%$, the number of phagocytic $3,26 \pm 0,12$, completeness phagocytosis index $1,17 \pm 0,06$, circulating immune complexes $74,98 \pm 2,59$ units. Among the factors of humoral immunity we determined the concentration of immunoglobulins IgA, Ig M, IgG. These indicators reflect the level of intensity of humoral immunity and are not specific, while their complex and dynamic assessment makes it possible to predict the

development of post-traumatic postoperative complications. Should be noted that analyzing of immunoglobulin performance fluctuations in serum IgA had not prognostic significance in damaged of hollow organs in the range $1,51 \pm 0,07$ g/l (variation 1,34% of the benchmark group). At the same time fluctuations IgA had significant level of $1,06 \pm 0,04$ g / l in trauma parenchymal organs (variation 28.85% of the benchmark group). Dynamics of IgA changes was explained in patients with damaged parenchymal organs by the volume of blood loss, efficiency of medical actions and compensatory capacity of the organism in posttraumatic period. A special place in determining and monitoring the progress of post-traumatic process there is the level of middle mass molecules (IMS) that characterize the level of endogenous intoxication (tabl. 1.1).

To identify the relationship between the development of multiorgan dysfunction syndrome and the occurrence of complications in post-traumatic period there were analyzed indicators of immune regulation. We were observed changes LII, IMS and activity of the complement system in cases of post traumatic complications on a background of multiple organ failure (tabl. 1.2).

Complications of abdominal trauma that developed against a background of multiple organ dysfunction had a long high level (more than 3 days) middle mass molecules. Increase level of IMS more than 200 standard units over a period 72 hours is an unfavorable factor for complications, because the percentage of occurrence of posttraumatic complications against the background multiple organ failure and high rates of MSM was 63.1%.

Table. 1.1

Dynamics of average IMS in patients with abdominal trauma research groups at the stages of treatment

Study group	Middle mass molecules, standard units			
	24 hours	72 hours	7-th day	10-TH DAY
I	0,183 ±0,024	0,402 ±0,011	0,324 ±0,037	0,247 ±0,012
N=35	p<0,001	p<0,001	p<0,001	P<0,001
II	0,269 ±0,014	0,341 ±0,008	0,384 ±0,019	0,278 ±0,011
N=55	P<0,001	P<0,001	P<0,001	P<0,001

Table. 1.2

Immunological predictors of multiorgan dysfunction syndrome in patients with dominant abdominal trauma

Studied parameters	controlgroup n=35	main group n=55
<i>Leukocyteindex of intoxication</i>	4,01±0,77	2,87±0,47
<i>Middle mass molecules ,standard units</i>	0,241±0,015	0,294±0,014
	p<0,05	p<0,05
<i>Activity of the complement system, standard units</i>	1,20±0,03	1,29±0,06
	p<0,05	p<0,05

In addition, the prolonged duration of multiple organ failure syndrome (over 2 days) cause significant changes in the indicators of phagocytosis, namely, the decreased rate of phagocytic index (18.2%) and was in the control group ($52,27 \pm 2,51$), study group ($49,74 \pm 3,74$).

For the diagnosis of multiple organ failure, other than direct clinical indicators used scale MODS. Characteristic changes in the ballroom range was observed in the indicators of phagocytosis and level of circulating immune complexes. In conducting the analysis and identification of key current values post traumatic period remains unclear primacy of fact relevant changes: violation of phagocytosis cause the development of multiple organ failure or multiple organ failure causes corresponding changes in the immune regulatory systems. Although generalized not only performance MODS scale but also clinical data and traumatic process we discovered interdependent evidence that these processes not

only lead to the emergence of each other, but also can provoke the development of infectious complications due to a significant fall in resistance of the organism as a whole (tab. 1.3).

The development of multiple organ failure occurs as a fragment of endogenous intoxication in which the immune system plays a role as the leading element of detoxification and elimination of antigenic fragments. To display this immunity using leukocyte index of intoxication allows a prediction criterion. Leukocyte index of intoxication and rate duration determined and was compared with indicators of phagocytosis, complement system activity, IMS (tab. 1.4).

Conclusion. Determination of immunological parameters has a leading role in predicting postoperative course in patients with abdominal trauma and reveals the development of infectious complications in the preclinical stage of their formation.

Tab. 1.3

Indicators of changes in nonspecific immunity in accordance with the development of multiple organ dysfunction syndrome

Indicators	MODS (points)			
	1-6	7-12	13-24	>24
<i>Phagocytic index, %</i>	61,29±3,09	66,14±3,47	41,93±1,52	25,15±1,21
	p>0,7	p>0,9	p<0,001	p<0,001
<i>Phagocytic number</i>	2,84±0,21	2,96±0,19	2,51±0,20	1,92±0,11
	p>0,2	p>0,07	p<0,001	p<0,001
<i>Index completion of phagocytosis</i>	1,43±0,21	1,48±0,19	1,15±0,18	0,71±0,19
	p>0,1	p>0,1	p>0,4	p<0,01
<i>Circulating immune complexes, units</i>	91,89±6,58	73,27±6,91	235,32±9,28	181,58±7,19
	p<0,01	p>0,8	p<0,001	p<0,001

Dynamics of changes nonspecific immunity in accordance with the criteria for prognosis of post-traumatic period

Indicators	<i>Leukocyte index of intoxication</i>			
	1-st level 2,7-3,7	2-nd level 3,8-5,8	3-rd level 5,8-8,5	4-th level 8,6 та >
<i>Middle mass molecules, standard units</i>	0,206	0,359	0,311	0,227
	±0,015	±0,013	±0,017	±0,021
	p<0,001	p<0,001	p<0,001	p<0,001
<i>Phagocytic index, %</i>	54,50±4,22	63,65±3,17	64,88±2,86	42,00±2,13
	p>0,05	p>0,7	p>0,9	p<0,001
<i>Phagocytic number</i>	3,00±0,26	2,95±0,23	2,84±0,21	2,42±0,20
	p>0,3	p>0,2	p>0,07	p<0,001
<i>Index completion of phagocytosis</i>	1,59±0,20	1,44±0,20	1,46±0,19	1,29±0,17
	p<0,05	p>0,1	p>0,1	p>0,4
<i>Circulating immune complexes, units</i>	53,60±4,76	93,76±5,57	76,04±6,95	221,60±8,26
	p<0,001	p<0,01	p>0,8	p<0,001
<i>Activity of the complement system, standard units</i>	1,11±0,04	1,16±0,02	1,21±0,03	1,28±0,01
	p<0,05	p<0,05	p<0,05	p<0,05

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IMMUNOLOGICAL PREREQUISITES COMPLICATED COURSE OF ABDOMINAL TRAUMA

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The article presents an analysis of the causes of abdominal trauma with complicated course according to immunological changes that may cause.

Key words: *abdominal trauma, complications, immunological changes.*