

Chair of Contagious Diseases of the Postgraduate
Study Faculty of State University of Medicine and
Pharmacology „Nicolae Testemitanu”
Clinical Hospital of Contagious Diseases „Toma
Ciorba”

1. The combine treatment with Cytomix+Guna Liver+Interferon gamma lymphocytic to patients with HVBC, HVCC and HVBC+HVCC
2. 2. The treatment with Cytomix to patients with HVBC, HVCC și HVBC+HVCC

The combine treatment of chronic viral hepatitis B, C and mixed B and C with Cytomix+Guna liver+Interferon gamma

There were realised studies to determine the combine treatment efficacy with Cytomix+Guna Liver+Interferon gamma in chronic viral hepatitis B, C and mixed B and C during 3 months (May, June, July, August, September, and October 2008) at the base of Chair of Contagious Diseases of the Postgraduate Study Faculty of State University of Medicine and Pharmacology „Nicolae Testemitanu” and Clinical Hospital of Contagious Diseases „Toma Ciorba”.

The characteristics of medicines

Cytomix is a combine medicine for the prophylaxis and treatment of contagious diseases, provoked by bacteria and viruses. It is a homeopathic medicine in granules for a sublingual administration.

Composition:

Ananassa 3x, Granulocyte colony stimulating factor 4c, 9c, 15c, 30c; Hydrocotyle asiatica 3x; Interferon gamma 4c; Interleucin I beta 5c; Interleukin 25c; 7c; Interleukin 4 4c; Interleukin 6 7c, 9c, 15c; Lymphatic vessel, Porcine 4c; medulla ossis suis 4c, Mountain cranberry 3x, Thymus gland, Porcine 4c, Saccharose.

Guna Liver is a homeopathic medicine in granules for a sublingual administration.

Composition:

Carduus marianus 20, Clavosus americanus 6x, Chelidonium majus 2x, Chionanthus virginica 6x, cholinum 4x Cobalamin 4x, Fumaricum acidum 4x, Gall bladder, Porcine 8x, Hepar suis 6x, Inositol 4x, Sejunum, Porcine 8x, Kali sulphuricum 6x/8x/12x, leptandra virginica 6x, lycopodium clavatum 6x, Natrum oxalaceticum 4x, Natrum pyruvicum 4x, Natrum sulphuricum 6x/8x/12x, Niacin 6x, Pancreas suis 8x, Pyridoxinum hydrochloricum 6x, Riboflavinum 6x, Spleen, Porcine 8x, taraxacum officinale 2x, Thiaminum hydrochloricum 6x, Saccharose.

Interferon gamma, lymphocytic is a liquid homeopathic medicine for a sublingual administration in drops

Composition:

Only one available dilution: 4CH

3 patients groups were been included in the study:

- I (first) group of patients, who were administered threetherapy with Cytomix+Interferon gamma+Guna Liver – 17 patients.
- II (second) group of patients, who were administered monotherapy with Cytomix – 10 patients.
- III (third) – control group - 16 patients.

The treatment was during 3 months.

Modality of medicines administration in the first group was:

The first month of treatment:

1. Interferon gamma – 26 days 20 drops twice a day sublingual (in the morning and evening) one hour before meals or one hour after meals. In Sundays the medicine was no administered.
2. Guna Liver – 26 days 3 granules twice a day sublingual in the morning and evening one hour before meals or one hour after meals. The medicine was indicated next 15 minutes after the administration of Interferon gamma.
3. Cytomix 10 granules twice a day sublingual, in the morning and evening first 5 days, next 21 days 3 granules twice a day sublingual, in the morning and evening in 15 minutes after administration of Guna Liver. In Sundays the medicine was no administered.

The second month of the treatment

1. Cytomix - 26 days 3 granules twice a day sublingual in the morning and evening one hour before meals or one hour after meals.
2. Guna Liver - 26 days 3 granules twice a day sublingual in the morning and evening 15 minutes after Cytomix administration.
3. Interferon gamma - 26 days 20 drops twice a day sublingual in the morning and evening 15 minutes after Guna Liver administration.

The third month of the treatment

1. Cytomix - 26 days 3 granules twice a day sublingual in the morning and evening one hour before meals or one hour after meals.
2. Guna Liver - 26 days 3 granules twice a day sublingual in the morning and evening 15 minutes after Cytomix administration.
3. Interferon gamma - 26 days 20 drops twice a day sublingual in the morning and evening 15 minutes after Guna Liver administration.

The treatment modalities in the II group

The first month of treatment Cytomix – 10 granules twice a day sublingual, in the morning and evening during 5 days, next 21 days 3 granules twice a day sublingual, in the morning and evening 15 minutes before meals.

The second month of treatment Cytomix - 26 days 3 granules twice a day sublingual in the morning and evening 15 minutes before meals. On Sundays the medicine was no administrated.

The third month of treatment Cytomix - 26 days 3 granules twice a day sublingual in the morning and evening 15 minutes before meals. On Sundays the medicine was no administered.

In III (control) group the treatment was no indicated.

Investigation methods

Patients with chronic viral hepatitis B

Serological investigations:

1. AgHBe
2. anti-HBe
3. anti-HBs

The kit: DSA.PRO Diagnostic Bioprobes SRL Milano-Italy

Biochemistry investigations:

1. ALAT
2. ASAT
3. Bilirubin
4. Timol test
5. Prothrombin

Clinical investigations:

1. Hemogram.

Patients with chronic viral hepatitis C

Serological investigations:

1. anti-HCV IgM

The kit: DSA.PRO Diagnostic Bioprobes SRL Milano-Italy

Biochemistry investigations:

1. ALAT
2. ASAT
3. Bilirubin
4. Timol test
5. Prothrombin

Clinical investigations:

1. Hemogram

Patients with mixed chronic viral hepatitis B+C

Serological investigations:

1. AgHBe
2. anti-HBe
3. anti-HBs
4. anti-HVC IgM

The kit: DSA.PRO Diagnostic Bioprobes SRL Milano-Italy

Biochemistry investigations:

1. ALAT

2. ASAT
3. Bilirubin
4. Timol test
5. Prothrombin

Clinical investigations:

1. Hemogram.

Immunological investigations:

- They were effected to the start of the treatment and after 3 months to the end of it in patients included in the study and in patients of the control group.

The Immunological status was appreciated by first level immunological tests. There was examined the leukocyte formula and calculated the leukocyte and lymphocyte number (relative and absolute) in the peripheral blood. Separated Lymphocytes from the heparinized blood, were utilized for the cell mediated immunity appreciation. There was determined the relative and absolute number of:

- Lymphocytes T and T actives (rosettes formator cells E totals and cells with a major affinity or actives);
- E theophylline resistant and theophyllines sensible rosettes formator cells;
- E totals thermostable rosettes formator cells (37°)
- Lymphocytes B (complementary rosettes formator cells – EAC-RFC);

The activity of the immunity humoral component was appreciated in accordance with the concentration of serologic immunoglobulins M, G, A, determined by radial immunodiffusion Mancini and circulatory complexes.

The clinical exam

Patients with HVCC, HVBC and mixed HVCC+HVBC were clinically examined: anamnesis, liver and spleen palpation and percussion, chest auscultation and percussion and heart auscultation if need.

The dynamics of Para clinical and clinical investigations

Laboratory exams: serologic investigations: the reveal of AgHBe, anti-HBe, anti-HBs, anti-HVC IgM; biochemistry investigations: the values determination of ALAT, ASAT, bilirubin, timol test, protrombin; and clinical exam – hemogram were made to the start and end of treatment.

Analysis of obtained results:

17 patients were been included **in the experimental group**, who administered threetherapy: 9 men and 8 women aged between 18 and 80 years, the middle age being 49,47 years, among them 8 had the diagnosis HVBC, the disease stage was between 1 an 13 years. 7 patients had the diagnosis HVCC, the disease stage was between 1 and 9 years and 2 patients with mixed chronic viral hepatitis B+C, to one patient the disease stage is equal with 1 year and to the second HVBC was detected 28 years ago, and HVCC was revealed 2 years ago.

10 patients were been include in the **second group** – they administered only Cytomix –7 men and 3 women aged between 18 and 51 years, the middle age being 42,7 years, 4 among them with the length of diagnosis HVBC between 4 and 12 years, 5 patients with the length of diagnosis HVCC between 4 and 6 years. One patient with mixed chronic viral hepatitis B+C the length of diagnosis HVBC was 12 years and of HVCC – 11 years.

There were included 16 patients n **the control group**: 10 men and 6 women aged between 27 and 72 years. The middle age was equal with 45,62 years, among them 6 patients with the diagnosis of HVBC and 8 patients with the diagnosis HVCC, and 2 patients with the mixed chronic viral hepatitis B+C. The disease length was between 5 to 17 years in patients with HVBC. The disease length was between 1 to 12 years in patients with HVCC. The disease length in patients with mixed chronic viral hepatitis B+C was: to one patient the both hepatitis forms were traced out 8 years before and to the second patient HVCC was diagnosed 12 years ago, and HVBC – 10 years ago.

Table 1

Clinical symptomatology and its evolution dynamics in patients of the experimental group

Symptom	To the tratament's start			To the tratament's end		
	HVBC n=8	HVCC n=7	HVBB+ HVCC n=2	HVBC n=8	HVCC n=7	HVBB+ HVCC n=2
Asthenia	3 (37,5%)	-	1	1 (12,5%)	-	-
Pains in the right hypochondrium	5 (62,5%)	2 (28,5%)	-	1 (12,5%)	-	-
Vertigo	2 (25%)	-	-	-	-	-
Myalgia	1 (12,5%)	2 (28,5%)	1	-	-	-
Arthralgia	1 (12,5%)	2 (28,5%)	-	-	-	-
Nausea	2 (25%)	-	1	-	-	-
General weakness	2 (25%)	-	-	-	-	-
Pruritus	1 (12,5%)	-	-	-	-	-
Hepatomegalia	6 (75%)	5 (71,7%)	2	2 (25%)	3 (43%)	1
Splenomegaly	5 (62,5)	3 (43%)	1	1 (12,5%)	1 (14,3%)	1

The table No 1 demonstrating the symptomatologie's poverty, but more frequent were revealed next symptoms: pains in the right hypochondrium, asthenia, hepatomegalia, splenomegaly. The clinic symptomatology was more rich at the treatment start in patients with HVBC. They demonstrated one more large gamma of symptoms comparatively with patients with HVCC and HVBC+HVCC.

The clinical symptomatology had ameliorated after 3 month of treatment and to the end of it were persisting only 2 clinical symptoms: asthenia and pains in right hypochondrium in patients with HVBC. The liver and spleen dimensions had decreased in all three groups with over 50% to the treatment' end comparatively with the liver and spleen dimensions to the treatment's start.

Table 2

Clinical symptomatology and its evolution dynamics to patients of the control group

Symptoms	To the tratament's start			To the tratament's end		
	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2
Asthenia	5 (83%)	2 (25%)	-	4 (66,6%)	1(12,5%)	-
Pains in the right hypochondrium	3 (50%)	5 (62%)	1	3 (50%)	2 (25%)	-
Vertigo	-	1 (12,5%)	-	-	1 (12,5)	-
Myalgia	1 (16,6%)	-	-	-	-	-
Arthralgia	1 (16,6%)	2 (25%)	-	-	2 (25%)	-
Nousea	1 (16,6%)	1 (12,5%)	-	1 (16,6%)	1 (12,5)	-
General weakness	3 (50%)	2 (25%)	-	3 (50%)	1 (12,5)	-
Prurigo	-	-	-	-	-	-
Hepatomegalia	5 (83%)	7 (87,5)	1	5 (83%)	7 (87,5%)	1
Splenomegaly	5 (83%)q	4 (50%)	2	5 (83%)	4 (50%)	2

The clinical symptomatology in patients of the control group, revealed in the table 2 demonstrating the poverty of clinical manifestations, they being quite the same both in patients with HVBC and HVCC. But the evolution analysis of these symptoms in dynamics had revealed its insignificant amelioration. Hepatomegalia and splenomegaly were been revealed with the same frequency – 83% and 87, 5% respectively to the start and the end of study.

Table 3.
Clinical symptomatology dynamics in the experimental and control groups on the threetherapy background

Symptom	To the treatment's start						To the treatment's end					
	Experimental group			Control group			Experimental group			Control group		
	HVBC n=8	HVCC n=7	HVBB+ HVCC n=2	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2	HVBC n=8	HVCC n=7	HVBB+ HVCC n=2	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2
Asthenia	3 (37,5%)	-	1	5 (83%)	2 (25%)	-	1 (12,5%)	-	-	4 (66,6%)	1 (12,5%)	-
Pains in the right hypochondrium	5 (62,5%)	2 (28,5%)	-	3 (50%)	5 (62%)	1	1 (12,5%)	-	-	3 (50%)	2 (25%)	-
Vertigo	2 (25%)	-	-	-	1 (12,5%)	-	-	-	-	-	-	-
Myalgia	1 (12,5%)	2 (28,5%)	1	1 (16,6%)	-	-	-	-	-	-	-	-
Arthralgia	1 (12,5%)	2 (28,5%)	-	1 (16,6%)	2 (25%)	-	-	-	-	-	2 (25%)	-
Nausea	2 (25%)	-	1	1 (16,6%)	1 (12,5%)	-	-	-	-	1 (16,6%)	1 (12,5%)	-
General weakness	2 (25%)	-	-	3 (50%)	2 (25%)	-	-	-	-	3 (50%)	-	-
Prurigo	1 (12,5%)	-	-	-	-	-	-	-	-	-	-	-
Hepatomegalia	6 (75%)	5 (71,8%)	2	5 (83%)	7 (87,5%)	1	2 (25%)	3 (43%)	1	5 (83%)	7 (87,5%)	1
Splenomegaly	5 (62,5%)	3 (43%)	1	5 (83%)	4 (50%)	1	1 (12,5%)	1 (14,3%)	1	5 (83%)	4 (50%)	1

A comparative analysis of the clinical symptomatology in the experimental and control groups demonstrating the presence only of two clinical symptoms in the experimental group to the end of treatment: asthenia to one patient and pains in the right hypochondrium to the second patient. The liver and spleen dimensions had normalised in both patients with HVBC and patients with HVCC. One moderate amelioration of the clinical

symptomatology was constated in patients of the control group. Hepatomegaly and splenomegaly were been reveale with the same frequency as to the study start.

Table 4
The clinical symptomatology dynamics to patients treated with Cytomix to the treatment' start and end

Symptoms	To the tratament's start			To the tratament's end		
	HVBC n=4	HVCC n=5	HVBB+ HVCC n=1	HVBC n=4	HVCC n=5	HVBB+ HVCC n=1
Asthenia	2 (50%)	2 (40%)	1	1 (25%)	-	-
Pains in the right hypochondrium	3 (75%)	3 (60%)	1	-	1 (20%)	-
Vertigo	-	1 (20%)	-	-	-	-
Myalgia	2 (50%)	3 (60%)	+	1 (25%)	1 (20%)	-
Arthralgia	3 (75%)	4 (80%)	+	-	1 (20%)	-
Nausea	-	1 (20%)	-	-	-	-
General weakness	-	1 (20%)	-	-	-	-
Pruritus	-	-	-	-	-	-
Hepatomegalia	4 (100%)	5 (100%)	1	3 (75%)	2 (40%)	-
Splenomegaly	4 (100%)	2 (40%)	-	2 (50%)	2 (40%)	-

The Table 4 demonstrating the clinical symptomatology amelioration in patients treated with Cytomix in all three groups. The liver and spleen dimensions had normalized to 50% patients were being in the study, and had decreased with 2 cm to other 50% patients.

Table 5

The dynamics of biochemistry indices in pactents with threetherapy to the treatment's start and finish

Biochemistry indices	To the tratament's start			To the tratament's finish		
	HVBC n=8	HVCC n=7	HVBB+ HVCC n=2	HVBC n=7	HVCC n=5	HVBB+ HVCC n=2
ALAT (increased)	7	6	2	5	2	1
ASAT (increased)	5	4	1	5	4	1
Bilirubin (increased)	1 (Sindrom Jilber)	2 (Sindrom Jilber)	-	2 (Sindrom Jilber)	1 (Sindrom Jilber)	-
Timol test (increased)	4	5	1	4	5	1
Prothrombinic Index (decreased till 70%)	1	2	1	1	1	1

The analysis of biochemistry indices in patients of the experimental group conducts us to some conclusions:

ALAT had normalized to a small number of patients - 2 with HVBC and 4 with HVCC, and the increased ASAT values had normalized in 4 patients, and had increased discreetly in 4 patients with normal values.

Bilirubin increased values had been revealed in patients with the Giber's Syndrome - 30 mcmmol/l and 24 mcmmol/l.

Timol test values had no modified.

The prothrombin index was normal to the majority of patients included in the study and only to one patient with the diagnosis HVBC and 2 with HVCC had decreased with 80 – 70%.

Tabel 6

The dynamics of biochemistry indices and thrombocytes to patients treated with **Cytomix+Guna Liver+Interferon gamma** to the treatment's start and finish, middle values

Index	Normal values	To the treatment's start			To the treatment's finish		
		HVBC n=8	HVCC n=7	HVBC+ HVCC n=2	HVBC n=8	HVCC n=7	HVBC+ HVCC n=2
General bilirubin	13,0-19,0 mcmmol/l	15,5±1,351	20,028±2,79	15,6±3,4	16,75±3,271	20,885±3,73	16,8±2,4
Direct bilirubin	0-4,59 mcmmol/l	0,6±0,6	1,628±1,101	1,2±1,2	0,6±0,392	2,028±1,402	2,37±2,37
Indirect bilirubin	13-14,41 mcmmol/l	14,9±0,854	14,6±2,025	14,4±2,4	17,4±2,345	18,6±2,610	16,8±2,4
ALAT	0,1-0,68 mmol/h/l	1,596±0,387	1,378±0,465	2,41±1,02	1,511±0,364	0,98±0,326	3,8±2,83
ASAT	15-42 UI	66,825±13,80	81,071±19,58	84,6±34,5	71,75±14,984	76,928±14,85	244,4±197,4
Prothrombinic Index	80-100%	74,05±9,512	80,6±1,569	81,15±3,85	85,237±1,578	83,957±2,396	82,05±2,95
Timol test	0-4 un	7,937±2,717	6,342±1,125	4,5±4	6,737±2,117	5,371±0,850	6,2±3,5
Thrombocytes	120-330 x10 ⁹ /l	196,25±20,81	175,28±27,56	171±80	259,25±18,43	185,028±21,18	157±30

The table 6 demonstrating the increased values of general bilirubin only in patients with HVCC both to the treatment's start and finish.

There is a tendency towards the normalization of ALAT indices in patients with HVBC and HVCC, and an insignificant increase in patients with mixed chronic viral hepatitis B+C.

There is revealing an insignificant increase of ASAT indices to the treatment's end in patients with HVBC and HVBC+HVCC, and a moderate decrease in patients with HVCC.

The prothrombinic index was insignificantly decreased in patients with HVBC, which had normalized to the treatment's end. The prothrombinic index was at the normal level in patients with HVBC and mixed HVBC+HVCC both to the start and the end of treatment. The thrombocytes number was normal in patients from all three groups both to the start and the end of treatment.

The dynamics of biochemistry indices in patients of the control group

Biochemistry indices	To the treatment's start			To the treatment's finish		
	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2
ALAT (increased)	4	5	1	4	4	1
ASAT (increased)	4	4	-	4	5	1
Bilirubina (increased)	3	1	-	3	-	-
Timol test (increased)	3	1	2	1	2	-
Prothrombinic Index (decreased)	2	3	2	2	2	-

The 7 table revealing one absence of modifications in biochemistry indices during three months of watching. The increased bilirubin level was revealed in patients with Gilbert's Syndrome. The prothrombinic index was decreased - in 2 patients with HVBC, 3 – with HVCC and 2 – with HVBC+HVCC, its values being between 80 and 70%.

Table 8

The dynamics of biochemistry indices and thrombocytes in patients from the **control group** to the start and the end of treatment, middle values

Index	Normal values	To the treatment's start			To the treatment's finish		
		HVBC n=6	HVCC n=8	HVBC+ HVCC n=2	HVBC n=6	HVCC n=8	HVBC+ HVCC n=2
General bilirubin	13,0-19,0 $\mu\text{mol/l}$	20,03±3,09	16,4±1,98	13,2±1,2	18,4±2,68	21,25±1,83	16,9±0,1
Direct bilirubin	0-4,59 $\mu\text{mol/l}$	2,28±0,81	1,8±0,75	0	1,0±0,65	1,5±0,77	0
Indirect bilirubin	13-14,41 $\mu\text{mol/l}$	13,63±2,79	15,6±1,50	13,2±1,2	15,76±2,26	20±1,46	15,4±1,4
ALAT	0,1-0,68 mmol/h/l	1,38±0,36	1,13±0,42	0,6±0,26	1,69±0,50	0,73±0,15	0,73±0,23
ASAT	15-42 UI	48,98±6,59	49,27±5,31	29,95±4,95	58,78±8,58	60,23±10,03	45±3
Prothrombinic index	80-100%	76,16±6,38	81,51±2,49	82,5±0,5	82,66±1,68	85,87±2,56	85,65±0,65
Timol test	0-4 un	6,65±1,79	3,41±0,84	22,3±9,3	7,53±1,75	3,81±0,78	16,65±12,35
Thrombocytes	120-330 $\times 10^9/l$	188,53±29,73	195,37±29,79	275±44	225,75±19,52	215,25±20,22	242±32

The table demonstrating a positive dynamics of general bilirubin in patients with HVBC, concomitantly bilirubin indices had increased in patients with HVCC and mixed chronic viral hepatitis B+C.

Timol test was high in patients with HVBC and HVBC+HVCC, and normal in patients with HVCC. Values had not suffered modifications to the end of the treatment.

Table 9

The dynamics of biochemical indices in patients treated with Cytomix

Biochemistry indices	To the start of the treatment			To the end of the treatment		
	HVBC n=4	HVCC n=5	HVBB+ HVCC n=1	HVBC n=4	HVCC n=5	HVBB+ HVCC n=1
ALAT (increased)	2	4	-	0	4	0
ASAT (increased)	1	5	-	0	3	0
Bilirubin (increased)	2	3	-	1	2	0
Timol test (increased)	2	2	-	0	1	0
Prothrombinic Index (decreased)	2	4	-	0	1	0

The table 9 demonstrating the normalization of ALAT, timol test and prothrombinic indices values and the amelioration of ASAT values after the treatment with Cytomix.

Table 10

The dynamics of biochemistry indices and thrombocytes in patients treated with **Cytomix** to the start and the end of treatment, middle values

Index	Normale values	To the start of the treatment			To the end of the treatment		
		HVBC n=4	HVCC n=5	HVBC+ HVCC n=1	HVBC n=4	HVCC n=5	HVBC+ HVCC n=1
General bilirubin	13,0-19,0 mcmol/l	22,3±3,556	22,56±4,84	9,6	15,1±3,226	21,62±4,72	12
Direct bilirubin	0-4,59 mcmol/l	7,3±3,847	3,32±1,761	0	3,15±2,263	0,96±0,96	0
Indirect bilirubin	13-14,41 mcmol/l	20,5±2,483	19,2±2,736	9,6	15,45±2,291	20,54±3,757	12
ALAT	0,1-0,68 mmol/h/l	1,41±0,548	1,646±0,630	0,29	0,41±0,184	1,636±0,340	0,81
ASAT	15-42 UI	44,65±21,785	61,3±4,131	41,1	29,525±2,969	68,108±12,645	49,6
Prothrombinic index	80-100%	80,475±1,715	76,34±3,033	89,5	92,025±3,329	83,9±2,359	87,2
Timol test	0-4 un	3,775±1,026	4,92±1,890	2,4	2,5±0,385	5,04±1,205	2,0
Thrombocytes	120-330 x10 ⁹ /l	294,75±58,717	201,4±59,06	232	274,333±34,381	235,6±47,04	159

The table 10 demonstrating a bilirubin moderate increased level in patients with diagnosis HVBC and HVCC, which had normalized in patients with HVBC and decreased in patients with HVCC to the end of treatment.

ALAT values had normalized in patients with HVBC and insignificantly increased in patients with HVCC.

The prothrombinic index was insignificantly decreased in patients with HVBC and suffered no modifications in patients with HVCC, and had decreased in patients with HVCC+HVBC.

The thrombocytes number had not modified both to the start and the end of the treatment.

Table 11

The dynamics of markers (serologic indices) in patients of the experimental group

Markers	To the strat of treatment			To the end of treatment		
	HVBC n=8	HVCC n=7	HVBC+ HVCC n=2	HVBC n=8	HVCC n=7	HVBC+ HVCC n=2
AgHBe	1	-	-	1	-	-
Anti-HBe	7	-	2	7	-	2
Anti-HBs	-	-	-	2	-	1
Anti-HVC IgM	-	7	2	-	7	2

The table 11 shows the AgHBe reveal to the start and the end of treatment in the same patients, seroconversion of HBe-anti-HBe had not happened.

AntiHBs had formed in 2 patients with the diagnosis chronic viral hepatitis B and in one patient with mixed chronic viral hepatitis B+C. This fact demonstrating a benefic action of the threetherapy with Interferon gamma+Guna Liver+Cytomix. These medicines, probably, possede antiviral actions.

Anti-HVC IgM had revealed with the same frequency to the start and the end of treatment. This fact demonstrates the antiviral properties absence on the hepatitis C virus.

Table 12

The dynamics of viral markers in patients treated with cytomix

Markers	To the start of treatment			To the start of treatment		
	HVBC n=4	HVCC n=5	HVBC+ HVCC n=1	HVBC n=4	HVCC n=5	HVBC+ HVCC n=1
AgHBe	-	-	-	-	-	-
Anti-HBe	4	-	1	4	-	1
Anti-HBs	-	-	-	1	-	-
Anti-HVC IgM	-	5	1	-	5	1

The table 12 demonstrating that chronic viral hepatitis B was AgHBe-negative in patients from the study. Anti-HBs had formed in patients after treatment in semnificative titres 91,6UI/l. So this may by an index on possible antiviral capacity of Cytomix.

Anti-HBcor IgM had revealed with the same frequency to the start and the end of treatment. So, possible antiviral capacities had not been demonstrate.

The dynamics of viral markers in patients of the control group

Markers	To the start of treatment			To the start of treatment		
	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2	HVBC n=6	HVCC n=8	HVBB+ HVCC n=2
AgHBe	-	-	-	-	-	-
Anti-HBe	6	-	1	6	-	1
Anti-HBs	0	-	-	0	-	0
Anti-HVC IgM	-	6	1	-	6	1

Data from the table 13 demonstrating the absence of AgHBe in patients being in the study with chronic viral hepatitis B, but there were revealed antibodies anti-HBe. There were not revealed both AgHBe and anti-HBe to one patient with the diagnosis mixed chronic viral hepatitis B+C. This fact represents one mutation on the level of AgHBe in chronic viral hepatitis with the virus B

Anti-HBs had not formed in 10 patients with hepatic virus B. Anti-HBs had formed in 3 patients from 10 in control group (30%) and in 1 patient treated with Cytomix.

Table 14

The dynamics of immunological indices in patients treated with Cytomix+Guna Liver+Interferon gamma to the treatment' start and end

Indices	Normal values	To the treatment' start			To the treatment' end		
		HVBC n=8	HVCC n=7	HVBC+ HVCC n=2	HVBC n=8	HVCC n=7	HVBC+ HVCC n=2
Leucocytes (10 ⁹ /l)	4,5-8,0	7,625±0,851	5,828±0,459	5,05±0,45	7,162±1,08	6,614±0,914	5,0±0,6
Lymphocytes (%)	22-38	31,625±2,499	32,142±3,261	40±4	35,125±3,286	33,428±3,379	35,5±0,5
Lymphocytes (10 ⁹ /l)	1,2-2,4	2,395±0,309	1,775±0,182	2,06±0,36	2,393±0,277	2,085±0,219	1,8±0,3
Lymphocytes Ta (%)	20-34	21,5±2,352	19±3,199	19,5±8,5	19,375±2,583	18,428±1,95	20,5±3,5
Lymphocytes Ta (10 ⁹ /l)	0,3-0,7	0,517±0,103	0,364±0,072	0,45±0,25	0,505±0,108	0,402±0,062	0,4±0,1
Lymphocytes Ttot (%)	55-75	45,625±3,035	40,857±2,364	40,5±1,5	45±4,246	45,285±4,892	53,5±19,5
Lymphocytes Ttot (10 ⁹ /l)	0,9-1,5	1,072±0,197	0,755±0,112	0,86±0,16	1,178±0,222	0,985±0,166	0,91±0,19
Lymphocytes Tterm (%)	0-5	4,75±2,335	4,571±1,862	6±4	0	0	0
Lymphocytes Tterm (10 ⁹ /l)	0-0,09	0,126±0,072	0,085	0,135±0,105	0	0	0
Lymphocytes TFR-E-RFC (%)	38-58	28,875±2,286	26,428±2,457	25±2	28,625±2,764	31,428±3,329	37,5±11,5
Lymphocytes TFR-E-RFC (10 ⁹ /l)	0,7-1,1	0,71±0,128	0,491±0,096	0,52±0,13	0,756±0,114	0,677±0,122	0,67±0,07
Lymphocytes TFS (%)	12-28	16,75±1,997	14,428±1,659	15,5±0,5	16,875±2,191	13,428±2,021	16±8
Lymphocytes TFS (10 ⁹ /l)	0,23-0,43	0,406±0,077	0,252±0,032	0,315±0,045	0,448±0,103	0,275±0,041	0,265±0,095
Lymphocytes EAC-RFC (%)	9-18	31±3,835	26,428±2,715	25,5±1,5	33,75±4,934	25,285±3,727	35,5±4,5
Lymphocytes EAC-RFC (10 ⁹ /l)	0,18-0,32	0,753±0,156	0,481±0,085	0,525±0,125	0,873±0,178	0,482±0,053	0,655±0,185
CIC (U.E.)	≤ 60	42,625±8,635	72±29,125	67±22	41±9,924	51,166±34,82	133,5±26,5
LTL	4-7	7,78±0,718	8,422±1,080	5,95±0,55	6,756±0,753	7,171±0,722	5,85±1,85
T/B	2,0-5,0	1,632±0,204	1,628±0,124	1,6	1,512±0,182	2,028±0,395	1,625±0,775
TFR/TFS	2,0-4,0	1,992±0,370	2,0±0,303	1,6±0,2	1,862±0,265	2,442±0,218	2,675±0,575

Data from the table 14 shows a T cell immunosuppression to the treatment' start in patients with the diagnosis HVBC: in III degree - 37,5%, II degree – 50% with a concomitant lymphocytosis B increase in 75% patients..

There was determined a T cell immunosuppression amelioration till normal values to the end of treatment - in 37,5% patients, but with the B lymphocytosis maintainance in various degrees- in 87,5% patients

There was determined an immunosuppression: III degree - in 14,3%, II degree - in 71,4% and a B lymphocytosis II degree – in 57,1%, an increased level of CIC – in 28,5% patients with HVCA.

An amelioration of the immunosuppression till normal values was determined in 42,8%, with the normalization of B lymphocytosis – in 57,1% patients to the end of treatment, but in 42,8% it had revealed a tendency to an B lymphocytosis increase in I degree as a result of the humoral reactivity. CIC returned to normal limits in 85,7% and only in one single patient it persisted at increased values, but there were considerably decreased – approximately twice (14,3%).

There were not constated positive modifications in patients with the diagnosis mixed chronic hepatitis B+C after treatment. Probably this fact was conditioned by a patients smoll number.

Conclusion: on remarks an amelioration of immune status in all patients groups after the complex treatment with Cytomix+Guna Liver + Interferon gamma, but a maximal benefic effect being constated in patients with HVBC.

The study needs to be continued for determination of patients groups, optimisation of tretament duration and its efficiency in dynamics.

Table 15

The dynamics of immunological indices in patients treated with Cytomix at the treatment's start and end

Indices	Normal values	To the treatment's start			To the treatment's end		
		HVBC n=4	HVCC n=5	HVBC+ HVCC n=1	HVBC n=4	HVCC n=5	HVBC+ HVCC n=1
Leucocytes ($10^9/l$)	4,5-8,0	6,325±0,342	5,5±0,63	4,6	6,95±0,464	5,08±0,649	4,4
Lymphocytes (%)	22-38	37±6,096	34±3,209	41	34,75±6,725	29,8±3,104	45
Lymphocytes ($10^9/l$)	1,2-2,4	2,425±0,249	1,916±0,345	1,9	2,325±0,271	1,56±0,302	2,0
Lymphocytes Ta (%)	20-34	20±3,240	13,8±2,905	16	15,5±1,5	18,6±1,363	16
Lymphocytes Ta ($10^9/l$)	0,3-0,7	0,525±0,131	0,286±0,081	0,3	0,377±0,078	0,206±0,068	0,32
Lymphocytes Ttot (%)	55-75	33,75±2,286	40,6±3,108	38	45±5,416	42,4±2,712	41
Lymphocytes Ttot ($10^9/l$)	0,9-1,5	0,85±0,125	0,822±0,183	0,7	1,092±0,269	0,66±0,143	0,8
Lymphocytes Tterm (%)	0-5	2,5±1,892	1±0,632	4	0	1,8±1,8	0
Lymphocytes Tterm ($10^9/l$)	0-0,09	0,057±0,042	0,02±0,013	0,07	0	0,032±0,032	0
Lymphocytes TFR-E-RFC (%)	38-58	22,75±2,428	28±1,760	25	29,5±3,685	26,2±1,827	30
Lymphocytes TFR-E-RFC ($10^9/l$)	0,7-1,1	0,57±0,113	0,558±0,121	0,5	0,725±0,16	0,442±0,104	0,6
Lymphocytes TFS (%)	12-28	11±0,912	12,6±1,503	13	15,5±2,872	17,2±2,537	11
Lymphocytes TFS ($10^9/l$)	0,23-0,43	0,267±0,032	0,258±0,064	0,25	0,38±0,114	0,33±0,106	0,22
Lymphocytes EAC-RFC (%)	9-18	27±6,916	22±4,062	22	20±4,242	26,4±2,158	17
Lymphocytes EAC-RFC ($10^9/l$)	0,18-0,32	0,64±0,162	0,43±0,114	0,42	0,397±0,058	0,412±0,093	0,34
CIC (U.E.)	≤ 60	45,25±11,360	59,2±15,477	90	66±16,643	45,6±18,004	34
LTL	4-7	7,945±1,181	7,67±1,083	6,5	7,35±1,504	8,22±1,075	5,5
T/B	2,0-5,0	1,715±0,418	2,05±0,430	1,7	2,75±0,850	1,55±0,197	2,4
TFR/TFS	2,0-4,0	2,037±0,380	2,28±0,152	1,9	2,075±0,375	1,668±0,303	2,7

The table 15 shows a T cell immunosuppression in patients with the diagnosis HVBC to the start of treatment – II degree in 75% and I degree – in 25%, and a B lymphocytosis III degree in 50%, I degree – in 25% patients. An amelioration till the return to immune status normal values had been constated to the end of treatment in 75% and a persistence of B lymphocytosis I degree – in 25% patients.

There was observed a T cell immunosuppression in patients with the diagnosis HVCC to the start of treatment– III degree in 40%, which had been persisting after treatment in 20%, a B lymphocytosis II degree – in 20% initially, but after treatment lymphocytosis II degree – in 40% patients. Probably it has an immunomodulator effect on humoral immunity.

There was observed a T cell immunosuppression in II degree and lymphocytosis in I degree to patients with the HVBC+HVCC, these indices had modified after treatment returning till normal values.

Conclusion: Cytomix has an immunomodulatory action and had influenced favourable on all patients categories, but a maximal expressively result it was observed in patients with HVBC and they with mixed HVBC+HVCC.

Table 16

The dynamics of immunological indices in control group of patients at the start and end of treatment

Indices	Normal values	To the treatment' start			To the treatment' end		
		HVBC n=6	HVCC n=8	HVBC+ HVCC n=2	HVBC n=6	HVCC n=8	HVBC+ HVCC n=2
Leucocytes ($10^9/l$)	4,5-8,0	5.6±0,700	5,775±0,480	5,55±1,15	5,5±0,705	4,937±0,546	5,15±0,85
Lymphocytes (%)	22-38	34,333±2,333	35,625±2,87	40±7	39,333±4,247	36,125±2,247	34,5±4,5
Lymphocytes ($10^9/l$)	1,2-2,4	1,961±0,230	2,081±0,254	2,13±0,07	2,205±0,405	1,812±0,245	1,75±0,05
Lymphocytes Ta (%)	20-34	15,333±2,788	17,25±1,655	15,5±3,5	13,166±2,056	14,75±1,760	18,5±8,5
Lymphocytes Ta ($10^9/l$)	0,3-0,7	0,288±0,036	0,366±0,060	0,345±0,045	0,338±0,089	0,272±0,042	0,35±0,15
Lymphocytes Ttot (%)	55-75	42,666±4,038	37,125±1,949	41±2	34,666±3,938	34,875±3,943	39,5±9,5
Lymphocytes Ttot ($10^9/l$)	0,9-1,5	0,873±0,147	0,781±0,101	0,85±0,05	0,823±0,197	0,687±0,125	0,7±0,2
Lymphocytes Tterm (%)	0-5	0,666±0,494	0,5±0,5	1±1	0,166±0,372	0	0
Lymphocytes Tterm ($10^9/l$)	0-0,09	0,013±0,011	0,015±0,015	0,02±0,02	0,001±0,001	0	0
Lymphocytes TFR-E-RFC (%)	38-58	30,166±2,676	26,125±2,614	26,5±0,5	24,833±2,903	22,25±2,403	30±9
Lymphocytes TFR-E-RFC ($10^9/l$)	0,7-1,1	0,595±0,092	0,551±0,088	0,575±0,025	0,586±0,132	0,433±0,085	0,55±0,15
Lymphocytes TFS (%)	12-28	12,5±1,979	11,25±1,221	14,5±2,5	9,833±1,777	12,625±2,419	9,5±0,5
Lymphocytes TFS ($10^9/l$)	0,23-0,43	0,255±0,052	0,226±0,041	0,305±0,065	0,231±0,062	0,238±0,059	0,165±0,015
Lymphocytes EAC-RFC (%)	9-18	21,666±2,333	22,25±2,160	24,5±4,5	16,166±3,070	18,375±4,597	24,5±0,5
Lymphocytes EAC-RFC ($10^9/l$)	0,18-0,32	0,43±0,074	0,456±0,060	0,525±0,115	0,356±0,076	0,361±0,107	0,43±0,02
CIC (U.E.)	≤ 60	46,333±2,564	54,125±12,99	80±15	55,666±14,061	90,375±27,56	38,5±31,5
LTL	4-7	7,066±0,828	8,168±0,99	6,5±1	7,8±0,977	8,125±0,909	7,65±0,95
T/B	2,0-5,0	2,191±0,442	1,768±0,171	1,725±0,225	2,483±0,406	2,731±0,539	1,605±0,355
TFR/TFS	2,0-4,0	2,988±1,336	2,668±0,538	1,875±0,375	3,058±0,858	2,017±0,302	3,1±0,8

The table 16 shows a T cell immunosuppression persistence in all patients from control group in II and III degree, that constitutes 81,3% and a B lymphocytosis in II degree in 68,7%, CIC with a high level –in 18,75% to the treatment start and with a tendency for increase in 43,7% during the study. These data confirm the need in an immunomodulator treatment.

Conclusions

1. The combined treatment with Cytomix+Guna Liver+ Interferon gamma had contributed to:
 - the amelioration of clinical symptomatology in patients with HVBC, HVCC and HVBC+HVCC
 - the liver and spleen dimensions had normalised in all patients from the study, but more frequently in patients with HVBC (above 50% of cases) comparatively with patients from control group. There were constated hepatomegaly and splenomegaly in patients of control group with the same frequency before and after treatment.
 - there was a moderate decrease of the cytolysis index value (ALAT, ASAT)
 - there was constated a seroconversion in the AgHBs system in 2 from 8 patients with the diagnosis HVBC and in 1 from 2 with the diagnosis HVBC+HVCC.
 - the formation of anti-HBs (protective antibodies) comparatively with AgHBs in 3 patients suggests us that these medicines possede probably antiviral capacities.
 - AntiHVC IgM had been revealed with the same frequency in patients with HVCC both to the start and the end of tretament, that meens a possible antiviral capacity in C hepatic virus had not confirmed.
 - it was constated an amelioration of immune status, wich was more pronounced in patients with HVCC.
2. The treatment with cytomix contributed to:
 - a clinic amelioration in patients with HVBC and HVCC.
 - the liver and spleen dimensions were normalilised in 50% patients from the study, and yet in 50% had reduced with 2 cm.
 - the normalization of ALAT, timol test and prothrombin index values
 - anti-HBs in seminificative titres had revealed in one patient from 4 with the diagnosis HVBC, that suggests about the presence of Cytomix antiviral capacities.
 - the amelioration of immune status with an immunomodulatory action, wich were more concludent in patients with HVBC and HVBC+HVCC.
3. An analysis of examinations in dynamics on control group had not constated any clinical, biochemical and immunological amelioration, that confirms the necessity in a patogenous and immunomodulatory treatment.
4. The study needs to be continued taking into account some biochemistry and immunological contradictory results for the determination of patients groups and treatment duration.

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