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LONG-TERM THROMBOTIC EVENTS IN PATIENTS WITH MYOCARDIAL INFARCTION: PROTEOMIC ANALYSIS OF PLATELETS AND PLASMA COMBINED WITH HEMOSTASIS ASSESSMENT

<i>Aim</i>	To determine factors associated with an increased risk of thrombotic complications during antiplatelet therapy in patients with acute myocardial infarction (AMI) based on a study of the parameters of hemostasis functional activity, as well as the proteomic composition of blood plasma and platelets.
<i>Material and methods</i>	A single-center prospective clinical study assessed hemostasis parameters and quantified the plasma and platelet proteome before and after dual antiplatelet therapy (DAPT) in 98 AMI patients. Clinical data on thrombotic complications that occurred during the follow-up period were collected for 12 months after the inclusion into the study. A statistical analysis of the collected data was performed, and the proteins were identified whose concentrations were associated with an increased risk of late thrombotic complications.
<i>Results</i>	The comparative analysis of patient groups with and without thrombotic complications revealed statistically significant differences in the concentrations of several proteins. The univariate regression analysis identified proteins associated with an increased risk of thrombotic complications in the long term. Statistically significant factors with a 95% confidence interval different from 0 were the concentrations of platelet proteins, including von Willebrand factor, complement component C8 β -chain, and cation-independent mannose-6 phosphate receptor.
<i>Conclusion</i>	The study identified proteins whose concentrations were associated with an increased risk of thrombotic complications in AMI patients taking DAPT. Before implementing these findings in clinical practice, a randomized prospective study should be performed for validation of the study results.
<i>Keywords</i>	Antiplatelet therapy; inflammation; acute myocardial infarction; proteomic analysis; platelets; von Willebrand factor
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SUPPLEMENTARY MATERIALS

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Table S1. Comparative analysis of parameters of the test for hemostasis functional activity

Parameter	Значения				p			
	Stage 1		Stage 2		(Group 1 vs. Group 2)		(Stage 1 vs. Stage 2)	
	Group 1	Group 2	Group 1	Group 2	Stage 1	Stage 2	Group 1	Group 2
Impedance aggregometry								
AUC Asa, U	24.00 [14.00; 36.00]	20.00 [13.00; 26.00]	8.00 [3.00; 13.00]	9.00 [2.00; 11.00]	0.360	0.670	<0.001	0.050
AUC ADP, U	33.00 [25.00; 45.00]	27.00 [26.00; 33.00]	12.00 [7.00; 16.00]	12.00 [9.00; 31.00]	0.258	0.379	<0.001	0.018
AUC TRAP-6, U	57.00 [45.00; 78.00]	47.00 [44.00; 52.00]	49.00 [37.00; 63.00]	40.00 [36.00; 50.00]	0.090	0.553	<0.001	0.726
Rotational thromboelastometry								
CT, s	650.50 [482.50; 824.00]	632.00 [586.00; 730.00]	652.00 [545.00; 787.50]	759.00 [661.00; 776.00]	0.842	0.139	0.299	0.203
CFT, s	650.50 [482.50; 824.00]	207.00 [182.00; 214.00]	198.50 [142.25; 276.75]	184.00 [161.00; 226.00]	0.685	0.572	0.652	0.820
A5, mm	30.00 [23.00; 38.00]	28.00 [27.00; 31.00]	31.00 [22.50; 38.50]	32.00 [27.00; 36.00]	0.633	0.684	0.220	0.374
A10, mm	44.50 [37.00; 51.00]	42.00 [41.00; 44.00]	48.00 [41.50; 55.00]	51.00 [46.00; 53.00]	0.655	0.540	<0.001	0.058
A15, mm	51.50 [45.00; 57.00]	48.00 [47.00; 50.00]	55.00 [49.50; 60.50]	57.00 [54.00; 61.00]	0.481	0.456	<0.001	0.038
A20, mm	55.00 [49.00; 59.00]	51.00 [50.00; 53.00]	58.00 [53.00; 63.00]	59.00 [58.00; 63.00]	0.417	0.473	<0.001	0.028
A25, mm	55.50 [51.00; 60.00]	54.00 [52.00; 55.00]	59.00 [54.50; 63.50]	60.00 [59.00; 64.00]	0.506	0.456	<0.001	0.033
A30, mm	56.00 [52.00; 61.00]	55.00 [52.00; 56.00]	59.00 [55.00; 63.50]	62.00 [59.00; 63.00]	0.553	0.416	<0.001	0.027
MCF, mm	56.00 [52.00; 61.00]	55.00 [53.00; 56.00]	60.00 [55.00; 64.00]	62.00 [59.00; 64.00]	0.510	0.494	<0.001	0.044
Li60, %	93.00 [90.00; 96.00]	94.00 [93.00; 95.00]	91.00 [88.00; 93.00]	91.00 [90.00; 92.00]	0.627	0.896	<0.001	0.106
ML, %	24.00 [21.00; 28.00]	24.00 [23.00; 25.00]	26.00 [23.00; 29.50]	25.00 [24.00; 28.00]	0.831	1.000	<0.001	0.282
CLT, min	24.50 [18.05; 32.55]	20.20 [16.42; 22.75]	24.15 [16.38; 30.22]	29.40 [26.95; 32.42]	0.142	0.095	0.250	0.016
Thrombodynamics test with assessment of endogenous lysis								
V, µm/min	36.75 [31.73; 43.55]	32.20 [29.00; 34.80]	31.40 [29.20; 35.10]	31.60 [30.10; 32.00]	0.149	0.420	<0.001	0.363
Vi, µm/min	61.05 [56.60; 64.65]	57.90 [55.80; 62.00]	58.40 [55.10; 62.15]	59.50 [55.00; 62.30]	0.311	0.820	<0.001	0.820
Vst, µm/min	35.20 [30.92; 40.10]	32.15 [28.75; 34.80]	31.40 [29.20; 34.70]	31.60 [30.10; 32.00]	0.141	0.485	0.001	0.673
CS, µm	1330.50 [1198.75; 1423.00]	1251.50 [1174.50; 1299.25]	1246.00 [1177.50; 1317.00]	1263.00 [1224.00; 1292.00]	0.306	0.970	0.002	0.844
D, conv.u.	27 434.00 [23 862.00; 30 854.00]	26 736.00 [24 053.00; 28 022.00]	29 518.00 [27 097.50; 32 733.50]	30 492.00 [27 986.00; 33 073.00]	0.658	0.600	<0.001	0.164
Tlag, min	1.10 [1.00; 1.20]	1.20 [1.00; 1.30]	1.10 [0.95; 1.20]	1.10 [1.00; 1.20]	0.548	0.701	0.209	0.529
Tsp, min	29.00 [18.80; 48.50]	33.55 [28.05; 51.12]	30.40 [21.30; 44.70]	60.80 [50.27; 71.62]	0.239	0.091	0.023	0.346
Li, %	52.00 [31.70; 56.80]	46.65 [40.50; 50.22]	46.85 [31.28; 54.42]	50.25 [35.90; 54.57]	0.730	0.563	0.024	0.688
LOT, min	30.20 [24.55; 39.50]	31.20 [27.53; 33.75]	29.85 [22.80; 41.22]	35.15 [32.80; 51.80]	0.982	0.089	0.103	0.176
LP, µm/min	3.60 [2.70; 7.50]	4.70 [3.95; 5.95]	4.60 [3.18; 8.72]	3.95 [3.08; 6.88]	0.692	0.474	0.039	0.688
LTE, min	30.90 [19.50; 41.10]	24.50 [19.05; 26.35]	29.55 [17.60; 38.38]	36.60 [24.08; 37.97]	0.283	0.349	0.169	0.156

The data are presented as median and interquartile range Me [Q1; Q3]. A, amplitude; α, α angle; CFT, clot formation time; CLT, clot lysis time; CS, clot size; CT, clotting time; D, density; LI, lysis index; LOT, lysis onset time; LP, lysis progression; LTE, lysis time estimation; MCF, maximum clot firmness; ML, maximum lysis; Tlag, time lag; Tsp, time spontaneous; V, clot growth rate; Vi, initial clot growth rate. Values in bold indicate p<0.05.

Table S2 (start). Comparative analysis of changes in plasma protein concentrations over time, Group 1

Parameter	Values, fmol/ μ L		P
	Stage 1	Stage 2	
Fibrinogen α -chain	16860.00 [13913.00; 21727.00]	20908.00 [17382.00; 28073.00]	<0.001
Fibrinogen β -chain	24134.00 [19759.00; 30225.00]	29189.00 [24364.00; 37580.00]	<0.001
Fibrinogen γ -chain	12767.00 [10540.25; 16833.25]	16148.50 [13811.50; 20041.50]	<0.001
Hyaluronan-binding protein 2	13.38 [11.90; 14.93]	14.91 [13.60; 16.02]	<0.001
Serum amyloid P-component	700.99 [612.52; 862.07]	786.16 [681.83; 873.35]	<0.001
Transthyretin	493.24 [327.74; 626.34]	557.48 [423.74; 767.44]	<0.001
Cholinesterase	53.12 [46.07; 60.06]	48.04 [42.01; 57.58]	0.001
Complement component C1r-like protein	61.70 [52.35; 72.31]	66.30 [57.20; 75.25]	0.001
Retinol-binding protein 4	1287.75 [711.81; 1609.78]	123.85 [650.73; 1439.95]	0.002
Lysozyme C	56.00 [46.58; 70.21]	59.85 [47.97; 80.36]	0.002
α_1 -B glycoprotein (VAR_018369)	2529.95 [2094.25; 2915.58]	2753.50 [2314.60; 3009.20]	0.003
α_2 -antiplasmin	1557.30 [1457.33; 1711.70]	1659.40 [1489.45; 1811.60]	0.004
Coagulation factor XIII A-chain	63.47 [52.40; 76.89]	58.65 [50.38; 63.99]	0.004
Fibronectin	676.01 [462.53; 960.77]	647.32 [403.06; 770.89]	0.005
Serotransferrin	18131.50 [15849.25; 21136.00]	17376.50 [14893.00; 20764.25]	0.005
Pigment epithelium-derived growth factor	373.37 [327.32; 440.19]	382.12 [347.76; 442.78]	0.006
Paraoxonase 1	587.70 [515.66; 685.29]	549.90 [480.20; 618.16]	0.007
Complement component C2	110.68 [93.64; 130.77]	125.09 [104.56; 147.53]	0.007
Vitronectin	5484.80 [4909.50; 6430.10]	5993.80 [5561.70; 6581.70]	0.011
β_2 -glycoprotein 1	2733.70 [2424.50; 2988.40]	2797.40 [2523.00; 3141.10]	0.018
Extracellular matrix protein 1	65.65 [56.06; 75.21]	61.74 [53.46; 70.11]	0.018
Apolipoprotein C-IV	53.12 [37.38; 83.13]	61.83 [40.50; 98.69]	0.033
Complement subcomponent C1q subunit B	124.80 [109.66; 151.05]	130.30 [114.31; 152.61]	0.026
Vitamin D-binding protein	4341.55 [4043.85; 4737.13]	4563.80 [4204.15; 4832.10]	0.024
α_1 -acid glycoprotein 1	7617.20 [6303.50; 9634.40]	10524.00 [9289.50; 12553.00]	<0.001
α_1 -antitrypsin	22 405.00 [19463.00; 25082.00]	25576.00 [22650.00; 30118.00]	<0.001
C-reactive protein	75.72 [35.99; 161.49]	420.19 [209.22; 858.88]	<0.001
Complement component C5	480.64 [427.60; 548.83]	530.05 [470.82; 631.37]	<0.001
Complement component C8 β -chain	134.49 [118.37; 156.17]	156.36 [134.13; 180.54]	<0.001
Complement component C9	511.86 [413.39; 648.83]	780.65 [662.43; 902.35]	<0.001
Complement component C4	3146.40 [2611.1; 3813.00]	3469.00 [3048.30; 4083.90]	<0.001
Haptoglobin	21054.00 [14808.00; 26177.25]	30969.00 [22281.00; 37370.75]	<0.001
Ig γ -1 chain C-domain	5829.90 [3833.18; 7291.30]	6303.40 [4351.18; 8646.18]	<0.001
Inter- α -trypsin inhibitor heavy chain H4	1556.90 [1274.30; 1848.10]	1749.50 [1477.70; 2252.40]	<0.001

Data are presented as median and interquartile range Me [Q1; Q3]. Values in bold indicate $p < 0.05$.

Таблица S2 (end). Comparative analysis of changes in plasma protein concentrations over time, Group 1

Parameter	Values, fmol/μL		P
	Stage 1	Stage 2	
Leucine-rich α ₂ glycoprotein	313.12 [247.2; 390.70]	518.13 [440.06; 600.30]	<0.001
Serum amyloids A1 and A2	110.20 [67.79; 179.61]	617.86 [306.71; 2252.70]	<0.001
Apolipoprotein (a)	265.05 [83.65; 641.00]	332.19 [148.41; 815.52]	<0.001
Apolipoprotein A-I	40 609.00 [34 714.00; 43 260.00]	34 362.00 [30 028.00; 38 217.00]	<0.001
Apolipoprotein D	1686.7 [1504.3; 1990.1]	1549.7 [1350.40; 1764.60]	<0.001
Apolipoprotein F	330.38 [283.49; 397.03]	390.31 [349.57; 463.36]	<0.001
Adiponectin	49.60 [38.90; 80.23]	49.88 [32.79; 71.92]	<0.001
Afamin	2 115.30 [1 828.00; 2 086.00]	1 819.00 [1 568.40; 2 086.00]	<0.001
α ₁ -antichymotrypsin	3 397.10 [2 736.30; 3 831.00]	4 496.00 [3 631.90; 5 116.20]	<0.001
α ₂ -HS-glycoprotein (fetuina-A)	1 747.20 [1 470.90; 1 985.90]	1 619.20 [1 403.80; 1 802]	<0.001
Apolipoprotein C-IV	53.12 [37.38; 83.13]	61.83 [40.51; 98.69]	0.033
Apolipoprotein E	874.97 [754.92; 1125.70]	714.36 [638.47; 893.83]	<0.001
Apolipoprotein M	639.28 [541.97; 774.44]	562.71 [514.91; 671.30]	<0.001
Attractin	112.79 [100.77; 123.50]	103.99 [93.36; 115.04]	<0.001
β ₂ -microglobulin	106.10 [86.75; 126.20]	110.05 [97.21; 139.52]	<0.001
C4b-binding protein α-chain	2 694.75 [2 314.73; 3 124.75]	2 941.80 [2 569.58; 3 439.32]	<0.001
Carboxypeptidase N catalytic subunit	102.94 [95.89; 123.08]	124.37 [108.22; 146.24]	<0.001
Ceruloplasmin	3 017.35 [2 741.13; 3 649.48]	3 348.90 [3 008.15; 3 840.05]	<0.001
Coagulation factor XII	318.83 [270.25; 387.37]	310.31 [238.30; 361.51]	<0.001
Complement subcomponent C1r	249.87 [222.79; 275.06]	272.57 [250.18; 275.06]	<0.001
Complement subcomponent C1s	459.21 [418.96; 506.91]	502.26 [464.46; 563.42]	<0.001
Complement subcomponent C3	6 382.00 [5 540.55; 7 064.05]	6 693.60 [6 272.10; 7 565.95]	<0.001
Complement subcomponent C8 α-chain	178.87 [155.47]	209.72 [186.24; 243.63]	<0.001
Complement factor B	2 074.80 [1 758.00; 2 386.90]	2 399.90 [2 141.90; 2 831.00]	<0.001
Complement factor I	391.26 [345.74; 441.44]	436.53 [377.41; 485.61]	<0.001
Gelsolin	943.38 [878.42; 1037.20]	818.59 [767.82; 890.04]	<0.001
Lumican	261.23 [228.55; 301.45]	214.37 [194.90; 264.46]	<0.001
Neuropilin 2	54.10 [44.20; 61.79]	60.08 [49.32; 67.41]	<0.001
Phosphatidylinositol-glycan-specific phospholipase D	54.29 [47.67; 61.69]	49.83 [39.69; 57.33]	<0.001
Phospholipid transfer protein	34.49 [29.63; 40.29]	27.81 [22.63; 32.63]	<0.001
C1 esterase inhibitor	1419.95 [1268.05; 1621.38]	1647.05 [1426.00; 1791.70]	<0.001
Tetranectin	214.04 [188.77; 238.68]	178.32 [153.00; 211.65]	<0.001
Zinc-α ₂ -glycoprotein	418.49 [328.64; 853.66]	441.23 [376.88; 970.77]	<0.001

Data are presented as median and interquartile range Me [Q1; Q3]. Values in bold indicate p<0.05.

Table S3. Comparative analysis of changes in plasma protein concentrations over time, Group 2

Parameter	Values, fmol/ μ L		p
	Stage 1	Stage 2	
Coagulation factor XIII A-chain	62.73 [57.54; 64.68]	50.03 [45.61; 53.45]	0.031
Fibrinogen α -chain	14 900.00 [13 468.00; 17 389.00]	23 963.00 [22 735.00; 24 310.00]	0.031
Fibrinogen γ -chain	11 314.00 [9 672.35; 13 110.00]	16 943.00 [16 109.00; 18 111.00]	0.031
α_1 -acid glycoprotein-1	5 588.15 [5 035.35; 7 330.60]	9 447.55 [8 287.70; 13 090.88]	0.031
α_1 -antitrypsin	24 339.50 [20 192.25; 25 888.00]	27 843.00 [25 362.50; 33 884.50]	0.031
C-reactive protein	69.99 [53.06; 95.23]	578.76 [253.37; 921.25]	0.031
Carboxypeptidase N catalytic subunit	86.76 [66.22; 99.63]	109.89 [99.02; 112.52]	0.031
Complement component C1r-like protein	59.27 [57.29; 62.50]	75.58 [66.60; 79.16]	0.031
Complement component C5	467.64 [447.74; 506.87]	598.13 [548.29; 692.64]	0.031
Complement component C8 β -chain	107.14 [97.10; 116.19]	149.73 [114.10; 175.02]	0.031
Complement component C9	432.71 [368.85; 501.76]	850.42 [767.13; 939.32]	0.031
Complement component C4	28 06.50 [2 725.88; 3 312.83]	4 099.85 [2 937.05; 5 121.43]	0.031
Haptoglobin	14 586.00 [70 24.88; 20 580.75]	27 626.00 [22 619.25; 37 564.00]	0.031
IgY-I chain C-domain	6 342.10 [3 998.45; 8 240.03]	7 098.85 [4 831.68; 9 205.60]	0.031
Inter- α -trypsin inhibitor heavy chain H4	12 58.00 [1 113.15; 13 74.65]	16 64.75 [1 381.45; 18 58.35]	0.031
Leucine-rich α_2 glycoprotein	252.16 [190.74; 289.59]	458.38 [391.40; 676.13]	0.031
Serum amyloids A1 and A2	91.36 [60.91; 165.45]	1441.55 [820.96; 2561.65]	0.031
Transtyretin	395.20 [356.29; 490.30]	673.01 [518.42; 844.53]	0.031
Apolipoprotein (a)	127.34 [76.54; 195.51]	193.46 [155.79; 824.15]	0.031
Apolipoprotein A-I	39 574.50 [37 570.25; 41 719.00]	33 889.00 [29 745.25; 36 955.00]	0.031
Apolipoprotein D	1585.45 [1519.98; 1967.88]	1379.55 [1153.35; 1866.90]	0.031
Apolipoprotein F	258.32 [229.54; 322.20]	377.20 [252.97; 527.26]	0.031
Cholinesterase	58.95 [54.28; 61.08]	43.36 [42.37; 53.05]	0.031

Values in bold indicate $p < 0.05$.

Table S4. Comparative analysis of changes in platelet protein concentrations over time, Group 1

Parameter	Values, fmol/ μ L		P
	Stage 1	Stage 2	
Leucine-rich α_2 glycoprotein	47.78 [26.39; 87.26]	84.59 [43.20; 170.62]	0.012
Paraoxonase 1	119.92 [57.82; 209.57]	70.09 [48.37; 160.78]	0.017
Retinol-binding protein-4	267.30 [107.17; 464.31]	144.10 [77.70; 254.76]	0.017
Apolipoprotein A-I	6 127.00 [4 058.80; 13 655.50]	5 129.55 [3 235.23; 8 467.30]	0.021
Phosphatidylinositol-glycan-specific phospholipase D	11.05 [7.25; 18.20]	8.12 [5.53; 14.90]	0.022
Insulin-like growth factor binding protein 2	14.89 [9.90; 22.02]	18.29 [13.83; 28.85]	0.022
Afamin	371.07 [205.28; 767.23]	266.02 [159.10; 519.35]	0.024
Apolipoprotein A-II	3 450.20 [1 674.68; 6 113.10]	2 350.65 [1 508.60; 4 417.38]	0.027
Fibrinogen β -chain	16 842.00 [13 908.00; 21 898.50]	17 319.50 [14 488.75; 22 416.75]	0.028
Apolipoprotein M	115.92 [66.10; 241.77]	85.67 [54.26; 159.71]	0.032
Immunoglobulin μ -chain C-domain in heavy chain disease	893.98 [404.78; 2040.68]	885.36 [359.83; 1442.78]	0.037
Matrix protein Gla	14.78 [8.67; 21.69]	18.90 [11.21; 26.00]	0.042
Fibrinogen α -chain	12 259.50 [8 845.48; 14 349.00]	12 672.00 [10 184.50; 14 936.00]	0.007
Lumican	51.98 [30.24; 96.79]	36.60 [26.03; 68.85]	0.007
Lipopolysaccharide-binding protein	37.96 [25.56; 53.53]	61.61 [39.35; 79.84]	<0.001
Follistatin-binding protein	23.32 [9.10; 38.03]	31.59 [22.85; 44.59]	0.001
Apolipoprotein C-IV	2 260.05 [1 300.08; 3 660.25]	1 482.40 [1 038.18; 2 258.68]	0.002
Apolipoprotein E	258.44 [150.71; 394.02]	181.05 [106.13; 269.61]	0.002
Fibrinogen γ -chain	9 153.95 [7 110.25; 11 386.25]	9 628.40 [8 264.23; 11 454.25]	0.006
Apolipoprotein B-100	244.23 [130.49; 384.20]	177.84 [108.49; 289.07]	0.010
Apolipoprotein A-IV	321.37 [160.31; 596.03]	171.00 [116.76; 258.30]	<0.001
Apolipoprotein C-III	5 302.25 [3 346.40; 8 769.65]	3 609.45 [2 328.93; 5 699.05]	<0.001
C-reactive protein	25.52 [5.49; 48.50]	75.68 [23.81; 136.04]	<0.001
Cystatin C	32.78 [24.39; 43.52]	43.44 [29.20; 54.50]	<0.001
Heat shock protein β_1	335.49 [232.13; 488.52]	377.20 [257.95; 582.48]	<0.001
Metalloproteinase inhibitor 1	305.21 [160.69; 515.86]	492.21 [315.18; 653.27]	<0.001
Metalloproteinase inhibitor 2	10.50 [6.68; 16.38]	15.10 [11.13; 20.13]	<0.001
Neuropilin-2	33.31 [25.68; 42.45]	40.01 [30.57; 53.44]	<0.001
Serum amyloids A1 and A2	42.43 [18.25; 73.01]	154.45 [73.83; 339.99]	<0.001
Secreted protein acidic and rich in cysteine	648.01 [306.41; 1 123.65]	1 050.85 [731.38; 1 333.03]	<0.001
Transtyretin	322.67 [240.41; 525.78]	277.22 [194.32; 441.76]	<0.001

Data are presented as median and interquartile range Me [Q1; Q3]. Values in bold indicate $p < 0.05$.

Table S5. Comparative analysis of changes in platelet protein concentrations over time, Group 2

Parameter	Values, fmol/ μ L		p
	Stage 1	Stage 2	
Apolipoprotein A-IV	390.41 [320.23; 616.02]	105.57 [85.88; 178.59]	0.047
Apolipoprotein C-I	2749.30 [2273.10; 4376.15]	1630.60 [1601.05; 1834.65]	0.016
Apolipoprotein C-III	6632.80 [5480.15; 8945.60]	4086.60 [2995.90; 5635.60]	0.016
Matrix protein Gla	9.94 [2.20; 16.61]	24.15 [10.98; 32.05]	0.031
Secreted protein acidic and rich in cysteine	1128.50 [657.75; 1228.55]	2072.00 [1322.00; 2331.40]	0.016
Metalloproteinase inhibitor 1	548.12 [281.15; 591.69]	915.97 [614.87; 1032.20]	0.016
Metalloproteinase inhibitor 2	15.13 [10.81; 20.10]	21.38 [18.54; 27.07]	0.047
Retinol-binding protein-4	174.70 [157.40; 465.60]	114.58 [74.65; 148.60]	0.047
Coagulation factor XII	71.04 [58.15; 95.90]	42.06 [34.72; 55.82]	0.047
Complement component C8 β -chain	23.81 [17.39; 29.18]	11.80 [6.94; 15.29]	0.047
Apolipoprotein D	579.57 [272.42; 684.81]	202.13 [153.14; 274.24]	0.047
Apolipoprotein E	286.34 [218.25; 413.67]	164.65 [144.34; 186.90]	0.047
β_2 -glycoprotein 1	906.89 [806.39; 1254.44]	424.75 [410.00; 644.37]	0.016

Data are presented as median and interquartile range Me [Q1; Q3]. Values in bold indicate $p < 0.05$.