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CLINICAL HEMORHEOLOGY - LITERATURE SURVEY

Editor: E. Ernst

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AARTS, P.A.*., VAN DEN BROEK, S.A., PRINS, G.W., KUIKEN, G.D., SIXMA, J.J. and HEETHAAR, R.M. Blood platelets are concentrated near the wall and red blood cells, in the center in flowing blood. *Arteriosclerosis* 8: 819-824, 1988.

Key words: blood flow velocity, erythrocyte membrane, platelet adhesiveness, erythrocyte deformability, hematocrit

Address for reprints: Department of Hematology, University Hospital Utrecht, The Netherlands.

ACCIAVATTI, A., GALIGANI, C., PIERAGALLI, D., BALDI, C. and DI PERRI, T. Effects of contrast media on rheological parameters: an in vivo study. *Rays* 12: 55-60, 1987.

Key words: diatrizoate, erythrocyte deformability, iopamidol, hematocrit, double-blind method.

No address available.

ALKHAMIS, T.M.*., BEISSINGER, R.D. and CHEDIAK, J.R. Red blood cell effect on platelet adhesion and aggregation low-stress shear flow. Myth or fact? *ASAIO Trans.* 34: 868-873, 1988.

Key words: erythrocytes, physiology, platelet adhesiveness, erythrocyte membrane

Address for reprints: Department of Chemical Engineering, Illinois Institute of Technology, Chicago 60616, USA.

AVELLONE, G., DI GARBO, V., PANNO, A.V., LONGO, B., ACCARDO, M.A. and STRANO, A. Valutazione di alcuni farmaci emoreologici nella ischemia del microcircolo (Evaluation of hemorrheological drugs in microcirculatory ischemia). *Clin. Ter.* 122: 121-127, 1987.

Key words: anticoagulants, vasodilator agents, erythrocyte deformability, microcirculation, review (English abstract)
No address available.

BADIMON, L.*., BADIMON, J.J., TURITTO, V.T., VALLABHAJOSULA, S. and FUSTER, V. Platelet thrombus formation on collagen type I. A model of deep vessel injury. Influence of blood rheology, von Willebrand factor, and blood coagulation. *Circulation* 78: 1431-1442, 1988.

Key words: blood platelets, physiology, vascular diseases, heparin, rheology
Address for reprints: Division of Cardiology, Mount Sinai Medical Center, New York, NY 10029, USA.

BALLAS, S.K.*., LARNER, J., SMITH, E.D., SURREY, S., SCHWARZ, E. and RAPPAPORT, E.F. Rheologic predictors of the severity of the painful sickle cell crisis. *Blood* 72: 1216-1223, 1988.

Key words: genetics, erythrocyte deformability, etiology
Address for reprints: Department of Medicine, Thomas-Jefferson-University, Philadelphia, PA, USA.

BAUDUCEAU, B.*., CHANUDET, X., CLEMENT, R., CELTON, H., LAFARGUE, P. and LARROQUE, P. Viscosite plasmatique et filtrabilite erythrocytaire au cours de l'HTA limite (Plasma viscosity and erythrocyte filterability in borderline hypertension). *J. Mal. Vasc.* 13: 339-343, 1988.

Key words: erythrocyte deformability, blood pressure, body weight, smoking (English abstract)
Address for reprints: Service de medecine interne et pathologie cardiovasculaire, HIA Begin, Saint-Mande, France.

BERETZ, A.* and CAZENAVE, J.P. The effect of flavonoids on blood-vessel wall interactions. *Prog. Clin. Biol. Res.* 280: 187-200, 1988.

Key words: endothelium, platelets, leukocytes, rheology, review
Address for reprints: Centre Regional de Transfusion Sanguine, INSERM U.311, Strasbourg, France.

BOEHME, H.R.*., NEUPERT, A. and FISCHER, W. Zur Beeinflussung hämorheologischer Parameter durch Beta-Rezeptorenblocker unter spezieller Berücksichtigung von Propranolol und Talinolol (Modification of hemorheologic parameters by beta-receptor blockers with special reference to propranolol and talinolol). *Z. Gesamte Inn. Med.* 43: 450-454, 1988.

Key words: blood viscosity, erythrocyte deformability, hypertension, propanolamines, propranolol, human (English abstract)
Address for reprints: Institut für Klinische Pharmakologie, Bereich Medizin, Karl-Marx-Universität Leipzig, GDR.

CIUFFETTI, G., MANNARINO, E., PASQUALINI, L., MERCURI, M., LENNIE, S.E. and LOWE, G.D.* The hemorheological role of cellular factors in peripheral vascular disease. *VASA* 17: 168-170, 1988.

Key words: erythrocyte deformability, fibrinogen, hematocrit, leukocyte, microcirculation, physiopathology
Address for reprints: Department of Medicine, Royal Infirmary, Glasgow, UK.

CRESPO, L.M.*¹, BIFANO, E.M. and FREEDMAN, J.C. Membrane lipid fluidity and filterability of red blood cells from adults and newborns. *Pediatr. Res.* 24: 433-437, 1988.

Key words: erythrocyte deformability, drug effects, physiology, membrane lipids

Address for reprints: Department of Pharmacology, State University of New York Health Science Center, Syracuse 13210, USA.

EHRLY, A.M.*¹, SEESENS, H. and SAEGER-LORENZ, K. Einfluß einer 10%igen und 6%igen Hydroxyethylstärkelösung (MG 200,000/0.62) im Vergleich mit einer 10%igen Dextranslösung (MG 40,000) auf die Fließeigenschaften des Blutes und den Gewebesauerstoffdruck von Patienten mit Claudicatio intermittens (Effect of a 10% and 6% hydroxyethyl starch solution (molecular weight 200,000/0.62) in comparison with a 10% dextran solution (molecular weight 40,000) on flow properties of blood and tissue oxygen pressure in patients with intermittent claudication). *Infusionstherapie* 15: 181-187, 1988.

Key words: blood flow velocity, dextrans, hemodilution, intermittent claudication, hydroxyethyl starch (English abstract)

Address for reprints: Abteilung für Angiologie, Universitätsklinikum Frankfurt am Main, FRG.

FERRETTI, G.*¹, DOTTI, M., BARTOLOTTA, E., GIORGI, P.L., CURATOLA, G. and BERTOLI, E. Changes of erythrocyte membrane fluidity associated with childhood obesity: a molecular study using fluorescence spectroscopy. *Biochem. Med. Metab. Biol.* 40: 101-108, 1988.

Key words: erythrocyte membrane, physiology, lipids, spectrometry

Address for reprints: Institute of Biochemistry, Faculty of Medicine, Ancona, Italy.

FU, L.W. and LI, X.X. Effects of oxyfedrine on blood rheology in rabbits. *Chung Kuo Yao Li Hsueh Pao* 9: 341-344, 1988.

Key words: blood viscosity, oxyfedrine, animal, hematocrit (English abstract)

No address available.

GRABOWSKI, E.F. Effects of contrast media on erythrocyte and platelet interactions with endothelial cell monolayers exposed to flowing blood. *Invest. Radiol.* 23, Suppl. 2: 351-358, 1988.

Key words: erythrocyte aggregation, platelet adhesiveness, pharmacology

Address for reprints: Division of Pediatric Hematology/Oncology, Hospital-Cornell University Medical Center, New York, NY 10021, USA.

HAKIM, T.S. Erythrocyte deformability and segmental pulmonary vascular resistance: osmolarity and heat treatment. *J. Appl. Physiol.* 65: 1634-1641, 1988.

Key words: erythrocyte deformability, heat, lung, vascular resistance, blood pressure, blood viscosity, physiology

Address for reprints: Department of Physiology, McGill University, Montreal, Quebec, Canada.

JIANG, C.W., TAN, R.Q. and YAN, W.M. Hemodynamic and hemorheologic changes in weak pulse in mitral stenosis patients. *Chung Hsi I Chieh Ho Tsa Chih* 8: 273-275, 1988.

Key words: hemodynamics, chinese traditional, physiopathology (English abstract)

No address available.

KOELTRINGER, P., LANGSTEGER, W., LIND, P., WAKONING, P. and EBER, O. Langzeitbeobachtung der Viskoelastizität des Vollblutes unter parenteraler Applikation von Ginkgo-biloba-Extrakt (Long-term study of the viscoelasticity of whole blood in parenteral administration of Ginkgo/biloba extract). *VASA Suppl.*, 26: 120-122, 1988.

Key words: arteriosclerosis, blood viscosity, drug effects
No address available.

KOENIG, W.*, ERNST, E. and MATRAI, A. Blood rheology associated with cardiovascular risk factors and chronic cardiovascular diseases: results of an epidemiologic cross-sectional study. *Angiology* 39: 986-995, 1988.

Key words: cardiovascular diseases, epidemiology, risk factors
Address for reprints: Department of Internal Medicine, University of Ulm, FRG.

KOZUBEK, A.*, JEZIERSKI, A. and SIKORSKI, A.F. The effect of nonadec(en)ylresorcinol on the fluidity of liposome and erythrocyte membranes. *Biochim. Biophys. Acta* 944: 465-472, 1988.

Key words: membrane fluidity, pharmacology, cholesterol, human, spin labels
Address for reprints: Instytut Biochemii, Uniwersytet Wrocławski, Poland.

LANDE, W.M.*, ANDREWS, D.L., CLARK, M.R., BRAHAM, N.V., BLACK, D.M., EMBURY, S.H. and MENTZER, W.C. The incidence of painful crisis in homozygous sickle cell disease: correlation with red cell deformability. *Blood* 72: 2056-2059, 1988.

Key words: erythrocyte deformability, pain, etiology, cell adhesion
Address for reprints: Department of Pediatrics, University of California, San Francisco, USA.

LE MIGNON, M.M.*, DUCRET, M.N., BONNEMAIN, B. and DONADIEU, A.M. Effect of contrast media on whole blood filtrability. An in vitro comparative study of iohexol, iopamidol and ioxaglate on rat blood. *Acta Radiol.* 29: 593-597, 1988.

Key words: physiology, pharmacology, erythrocyte deformability, animal
Address for reprints: Laboratoire Guerbet, Aulnay-Sous-Bois, France.

LEVIN, G.I., TSAREVSKII, N.N. and KOTIAEVA, N.P. Metod opredelenia deformiruemosti eritrotsitov v iskusstvennom sdvigovom potoke (A method of determining erythrocyte deformability in an artificial shear flow). *Lab. Delo.* 5: 22-24, 1988.

Key words: methods, red cell deformability, viscometry (English abstract)
No address available.

LIKHOVETSKAIA, Z.M., PRIGOZHINA, T.A. and GORBUNOVA, N.A. Gomoreologicheskie narusheniia pri shoke razlichnoi etiologii (Hemorheologic disorders in shock of diverse etiology). *Biull. Eksp. Biol. Med.* 106: 426-428, 1988.

Key words: physiopathology, animal, blood viscosity, burns, erythrocyte aggregation, erythrocyte deformability (English abstract)
No address available.

LUO, G., SHEN, C., YANG, W. and ZHANG, Y. Effects of ligustrazine and anisodamine on rabbit whole blood viscosity and erythrocyte deformability. *Chin. Med. J. (Engl.)* 101: 48-51, 1988.

Key words: erythrocyte deformability, drug effects, pyrazines, vasodilator agents
No address available.

MA, X.L., ZANG, Y.M., ZHU, M.Z. and WANG, Y.M. Role of the adrenal medulla in hemorheologic changes during myocardial ischemia in dogs. *Sheng Li Hsueh Pao* 40: 140-144, 1988.

Key words: blood viscosity, animal, hematocrit, rheology (English abstract)
No address available.

MUGGIA, C., RANIERI, M.G., BOBBA, L., TESTA, F., MARTIHNONI, A., PERANI, G. and FINARDI, G. Calcioantagonisti e filtrabilità ematica (Calcium antagonists and blood filterability). *Clin. Ter.* 123: 281-285, 1987.

Key words: pharmacology, erythrocyte deformability, hypertension, double-blind method (English abstract)

No address available.

NASH, G.B.*., JONES, J.G., MIKITA, J., CHRISTOPHER, B. and DORMANDY, J.A. Effects of preparative procedures and of cell activation on flow of white cells through micropore filters. *Br. J. Haematol.* 70: 171-176, 1988.

Key words: leukocytes, drug effects, physiology, micropore filters
Address for reprints: Department of Haematology, St. George's Hospital, Medical School, London, UK.

OFFIDANI, A.M., SIMONETTI, O., CERIONI, S., FERRETTI, G., MARCHISEPPE, I. POSTIGLIONE, M.R. and VALENTINO, M. Decreased membrane fluidity in polymorphonuclear cells in psoriasis. *Boll. Soc. Ital. Biol. Sper.* 64: 495-500, 1988.

Key words: fluidity, neutrophils, human
No address available.

PESERICO, A.*., VELLER FORNASA C., CIPRIANI, R., PERENZIN, G. and CODOLO, R. Diminished blood filterability in psoriasis. *Arch. Dermatol. Res.* 280: 390-391, 1988.

Key words: erythrocyte deformability, psoriasis, human
Address for reprints: Clinical Dermatologica, Universita di Padova, Italy.

REINHART, W.H.*., SUNG, L.P., SUNG, K.L., BERNSTEIN, S.E. and CHIEN, S. Impaired echinocytic transformation of ankyrin- and spectrin-deficient erythrocytes in mice. *Am. J. Hematol.* 29: 195-200, 1988.

Key words: blood proteins, erythrocyte deformability, spectrin, animal
Address for reprints: Department of Physiology, Columbia University, College of Physicians and Surgeons, New York City, New York, USA.

ROGAUSCH, H. Influence of shape stabilizing agents on the deformability and morphology of lysolecithin-treated erythrocytes. *Arzneimittelforschung* 38: 1478-1481, 1988.

Key words: erythrocyte deformability, drug effects, ultrastructure, propranolol

Address for reprints: Department of Physiology, Philipps-Universität, Marburg/Lahn, FRG.

SUGIHARA-SEKI, M.* and SKALAK, R. Numerical study of asymmetric flows of red blood cells in capillaries. *Microvasc. Res.* 36: 64-74, 1988.

Key words: physiology, erythrocytes, microcirculation, blood viscosity, rheology

Address for reprints: Bioengineering Institute, Columbia University, New York, New York 10027, USA.

UYESAKA, N. Pressure-flow relationship of erythrocyte suspension in perfusion of nucleopore membrane and red cell deformability. *Jpn. J. Physiol.* 38: 145-158, 1988.

Key words: erythrocyte deformability, erythrocyte volume, hematocrit
Address for reprints: 1st Department of Physiology, Nippon Medical School, Tokyo, Japan.

VOITENKO, I.I. and TANASHKIN, S.F. Srednyi ob'em eritrotsitob, ikh deformiruemost' i osmolial'nost' syvorotki krovi u bol'nykh virusnym hepatitom (The mean volume of erythrocytes, their deformability and osmolarity in the blood serum of patients with viral hepatitis). *Lab. Delo.* 8: 36-38, 1988.

Key words: erythrocyte deformability, erythrocyte indices, hepatitis, osmolar concentration (English abstract)
No address available.

YASUI, K.*., MASUDA, M., MATSOIKA, T., YAMAZAKI, M., KOMIYAMA, A., AKABANE, T., HASUI, M., KOBAYASHI, Y. and MURATA, K. Abnormal membrane fluidity as a cause of impaired functional dynamics of modulation of the receptors by a membrane fluidizer. *Pediatr. Res.* 24: 442-446, 1988.

Key words: pharmacology, drug effects, neutrophils, physiology
Address for reprints: Department of Pediatrics, Shinshu University School of Medicine, Matsumoto, Japan.

YONG-DE, S.* and ZE-JUN, L. Imitation and comparison for three rheological equations to blood flow curves. *Acta Biophys. Sinica* 4: 44-49, 1988.

Key words: microhemorheology, hematocrit, erythrocytes, viscosity, yield stress (English abstract)
Address for reprints: Department of Biophysics, Shanghai Medical University, 138 Yi Xue Yuan Road, Shanghai 200032, China.

YONG-DE, S.*., ZE-JUN, L., SHUQI, C., LEI, C. and YANFANG, B. Imitation and application of casson equation to the curves from Couette-flowing and capillary-laminar-flowing. *Acta Academiae Medicinae* 15: 166-172, 1988.

Key words: Casson equation, yield stress, blood viscosity, Couette flow, capillary laminar flow, hemorheology (English abstract)
Address for reprints: as above.

YUAN, Y.W.* and SHUNG, K.K. Ultrasonic backscatter from flowing whole blood. II: Dependence on frequency and fibrinogen concentration. *J. Acoust. Soc. Am.* 84: 1195-1200, 1988.

Key words: blood flow velocity, erythrocyte aggregation, physiology, hematocrit, swine
Address for reprints: Bioengineering Program, Pennsylvania State University, University Park 16802, USA.

ZHAO, Z.Q., WANG, Y.M., ZHU, M.Z. and ZANG, Y.M. Effects of acute myocardial ischemia on changes in hemorheology and heart contractile function. *Sheng Li Hsueh Pao* 40: 293-298, 1988.

Key words: blood viscosity, coronary disease, physiopathology, animal, rheology (English abstract)
No address available.

ZHU, P.J. C D-S mixture (Chinese herbal drugs) in the treatment of hyper-hemoviscosity state in nephrotic syndrome and analysis of its therapeutic effects. *Chung Hsi I Chieh Ho Tsa Chih* 8: 207-209, 1988.

Key words: blood viscosity, drug effects, chinese herbal, human, prednisone, rheology (English abstract)
No address available.