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## CLINICAL HEMORHEOLOGY - LITERATURE SURVEY

Editor: E. Ernst

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BARABINO, G.A.\*, McINTIRE, L.V., ESKIN, S.G., SEARS, D.A. and UDDEN, M. Rheological studies of erythrocyte-endothelial cell interactions in sickle cell disease. *Proc. Clin. Biol. Res.* 240: 113-127, 1987.  
Key words: anemia, sickle cell, endothelium, erythrocytes, cell adhesion  
Address for reprints: Dept. of Chemical Engineering, Rice University, Houston, Texas, USA.

CHESEBRO, J.H.\*, LAM, J.Y., BADIMON, L. and FUSTER, V. Restenosis after arterial angioplasty: a hemorrheologic response to injury. *Am. J. Cardiol.* 60: 10B-16B, 1987.  
Key words: angioplasty, arterial occlusive diseases, platelet adhesiveness, vasoconstriction  
Address for reprints: Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, Minnesota 55905, USA.

CRAVERI, A.\*, TORNAGHI, G., PAGANARDI, L., DI BELLA, M., GALLO, E. and STANZANI, M. Aumento della viscosita eritrocitaria e plasmatica in pazienti affetti da vasculopatia aterosclerotica a diversa localizzazione. (Increase in erythrocyte and plasma viscosity in patients with atherosclerotic vasculopathy of different sites) *Minerva Med.* 78: 815-822, 1987.  
Key words: arteriosclerosis, blood viscosity, erythrocyte deformability (English abstract)  
Address for reprints: II. Divisione di Medicina Generale, Universita di Milano, Ospedale San Paolo, Italy.

CRAVERI, A.\*, TORNAGHI, G., PAGANARDI, L., LANFREDINI, M., CITELLA, C. and LEONARDI, G. La viscosita ematica, plasmatica, eritrocitaria e l'indice di filtrazione eritrocitaria in soggetti affetti da iperlipemia. (Blood, plasma, erythrocyte viscosity and index of erythrocyte filtration in subjects with hyperlipemia) **Minerva Med.** 78: 823-829, 1987.

Key words: blood viscosity, erythrocyte deformability, hyperlipidemia, hematocrit (English abstract)

Address for reprints: as above

CRAVERI, A.\*, TORNAGHI, G., PAGANARDI, L., RANIERI, R., LEONARDI, G. and DI BELLA, M. Le alterazioni emoreologiche negli obesi. Studio della viscosita ematica, eritrocitaria, plasmatica, del fibrinogeno e dell'indice di filtrazione eritrocitaria. (Hemorheologic disorders in obese patients. Study of the viscosity of the blood, erythrocytes, plasma, fibrinogen and the erythrocyte filtration index) **Minerva Med.** 78: 899-906, 1987.

Key words: blood viscosity, erythrocyte deformability, hematocrit, obesity, fibrinogen (English abstract)

Address for reprints: as above

CRAVERI, A.\*, TORNAGHI, G., PAGANARDI, L., RANIERI, R., DI BELLA, M. and GALLO, E. Le alterazioni emoreologiche del globulo rosso in soggetti a rischio per aterosclerosi. (Hemorheologic disorders of red cells in subjects at risk for atherosclerosis) **Minerva Med.** 78: 893-898, 1987.

Key words: blood viscosity, erythrocyte deformability, hyperlipidemia, smoking, hematocrit, atherosclerosis (English abstract)

Address for reprints: as above

EHRLY, A.M.\*, LANDGRAF, H., MOSCHNER, P.V. and SAEGER-LORENZ, K. Verhalten des Gewebesauerstoffdruckes und der Fließeigenschaften des Blutes bei Patienten mit Claudicatio intermittens nach Infusion von 500ml 6%iger Hydroxyethylstärke Lösung im Vergleich zu physiologischer Kochsalzlösung. (Behavior of tissue oxygen pressure and flow properties of blood in patients with intermittent claudication following infusion of 500ml of a 6% hydroxyethyl starch solution in comparison to physiologic saline solution) **VASA** 16: 103-113, 1987.

Key words: intermittent claudication, oxygen, rheology, sodium chloride, hydroxyethyl starch (English abstract)

Address for reprints: Dept. Angiology, University of Frankfurt, Theodor-Stern-Kai, Frankfurt, FRG.

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Key words: models, blood flow velocity, erythrocyte deformability

Address for reprints: Dept. of Biomedical Engineering, Duke University, Durham, NC 27706, USA.

GIDDENS, D.P. and KU, D.N. A note on the relationship between input flow waveform and wall shear rate in pulsatile, separating flows. **J. Biomech. Eng.** 109: 175-176, 1987.

Key words: rheology, algorithms, biomechanics, carotid arteries

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Key words: blood flow velocity, blood pressure, carotid arteries, hypertension, perfusion, stress

Address for reprints: Dept. of Anatomy and Cellular Biology, Tufts University School of Medicine, Boston, Massachusetts 02111, USA.

IRINO, O.\*, SAITOH, K., BANDO, K., UCHIDA, M. and HONDA, H. Effects of ifenprodil tartrate on erythrocyte deformability and cerebral blood flow. *Nippon Yakurigaku Zasshi* 89: 197-202, 1987.

Key words: cerebrovascular deformability, piperidines (English abstract)

Address for reprints: Research Laboratory, Grelan Pharmaceutical Co., Ltd., Tokyo, Japan.

ISOGAI, Y.\* and IKEMOTO, S. Rheological examination of thrombus formation and hemostasis. *Rinsho Byori* 70: 70-78, 1987.

Key words: hemostasis, thrombosis, blood viscosity, erythrocyte aggregation (English abstract)

Address for reprints: 3rd Dept. Medicine, 25-8 Nishi-Shinbashi, 3-Chome, Monato-ku, Tokyo 105, Japan.

JACOBS, M.J., SLAAF, D.W., LEMMENS, H.A. and RENEMAN, R.S. Haemorheology and dynamic capillary microscopy. *VASA* 18: 28-31, 1987.

Key words: blood flow velocity, microscopy, Raynaud's disease, blood viscosity, regional blood flow

No address available.

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Key words: blood viscosity, erythrocyte deformability, purinones, leukocytes, pentoxifylline

Address for reprints: Beecham-Wuelving Research Laboratories, Gronau, Leine, FRG.

KEIDAN, A.J. \* and STUART, J. Rheological effects of bed rest in sickle cell disease. *J. Clin. Pathol.* 40: 1187-1188, 1987.

Key words: red cell deformability, hematology, immobilization

Address for reprints: Dept. of Haematology, The Medical School, University of Birmingham, Birmingham, UK.

KLOSE, R.\*, FELDMANN, U. and HOECKER, P. Der Einfluß von 10%iger Hydroxyäthylstärke 200/0.5 und 10%igem Dextran 40 auf die Fließeigenschaft und Gerinnung von Vollblut in vivo. (Effect of 10% hydroxyethyl starch 200/0.5 and 10% dextran 40 on the flow property and coagulation of whole blood in vivo) *Infusionsther. Klin. Ernähr.* 14: 37-42, 1987.

Key words: blood coagulation, blood viscosity, dextrans, hydroxyethyl starch (English abstract)

Address for reprints: Abteilung für Anästhesie und Intensivmedizin der Berufsgenossenschaftlichen Unfallklinik Ludwigshafen, FRG.

LABOW, R.S.\*, CARD, R.T. and ROCK, G. The effect of the plasticizer di(2-ethylhexyl)phthalate on red cell deformability. **Blood** 70: 319-322, 1987.

Key words: erythrocyte deformability, phthalic acids, plasticizers, adenosine triphosphate, erythrocyte membrane, osmotic fragility

Address for reprints: Ottawa Center, Canadian Red Cross, Blood Transfusion Service, Ontario, Canada.

NOGUCHI, C.T.\*, RODGERS, G.P. and SCHECHTER, A.N. Intracellular polymerization of sickle hemoglobin: disease severity and therapeutic goals. **Prog. Clin. Biol. Res.** 240: 381-391, 1987.

Key words: anemia, sickle cell, erythrocytes, hemoglobin C disease, rheology

Address for reprints: National Institute of Diabetes, Digestive and Kidney Diseases, Bethesda, MD 20892, USA.

NUTTALL A.L. Velocity of red blood cell flow in capillaries of the guinea pig cochlea. **Hear Res.** 27: 121-128, 1987.

Key words: cochlea, erythrocytes, guinea pigs, microcirculation

Address for reprints: Kresge Hearing Research Institute, Dept. of Otolaryngology-Head and Neck Surgery, Medical School, University of Michigan, Ann Arbor 48109, USA.

ORLOV, B.N., KORNEVA, N.V. and ROMANOVA, E.B. Reologicheskie svoistva krovi i eritrotisitarnykh suspenzii v usloviakh vozdeistviia zootoksinov. (Rheological properties of the blood and erythrocyte suspension after exposure to zootoxins) **Biol. Nauki.** 4: 51-55, 1987.

Key words: blood viscosity, erythrocyte deformability, venoms, rheology (English abstract)

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Key words: alopecia areata, adult, child (English abstract)

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Key words: arterial occlusive diseases, ischemia, rheology (English abstract)

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Key words: diabetes mellitus, erythrocyte deformability

Address for reprints: Dept. of Medicine, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark 07103, USA.

SACKS, F.M.\*, STAMPFER, M.J., MUNOZ, A., MCMANUS, K., CANESSA, M. and KASS, E.H. Effect of linoleic and oleic acids on blood pressure, blood viscosity, and erythrocyte cation transport. *J. Am. Coll. Nutr.* 6: 179-185, 1987.

Key words: fatty acids, eicosanoids, atherosclerosis

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Key words: alprostadil, erythrocyte deformability, ultrafiltration, pentoxifylline, perfusion

Address for reprints: Dept. of Surgery, University of Tsukuba, Japan.

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Key words: erythrocyte sedimentation rate, blood density, hematocrit

Address for reprints: Institute of Physiology, University of Graz, Harrachgasse 21/V, 8010 Graz, Austria.

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Key words: anti-ischemic drug, hematology, pharmacology

Address for reprints: Department of Haematology, Medical School, University of Birmingham, Birmingham, U.K.

TURNER, S.\*, WILLIAMS, A.R., and REES, J.M. The use of nystatin to restore the flow properties of time-expired stored erythrocytes. *Vox Sang.* 52: 182-185, 1987.

Key words: blood preservation, erythrocyte deformability, citrates, glycose, osmolar concentration

Address for reprints: Dept. of Medical Biophysics, University of Manchester, UK.

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Key words: erythrocyte deformability, malaria, membrane proteins, osmotic fragility

Address for reprints: Dept. of Biochemistry, Faculty of Science, Mahidol University, Bangkok, Thailand.

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Key words: blood viscosity, fetal development, infarction, pregnancy, rheology

Address for reprints: Dept. of Obstetrics and Gynecology, Academic Medical Center, University of Amsterdam, The Netherlands.

ZUBENKO, G.S.\*, COHEN, B.M., REYNOLDS, C.F. 3d, BOLLER, F., MALINAKOVA, I. and KEEFE, N. Platelet membrane fluidity in Alzheimer's disease and major depression. **Am. J. Psychiatry** 144: 860-868, 1987.

Key words: Alzheimer's disease, blood platelets, depressive disorder, membrane fluidity

Address for reprints: Dept. of Psychiatry, University of Pittsburgh School of Medicine, PA, USA.

ZWIENER, U.\* and BELGRAD, D. Objektivierung rheologisch-hämodynamischer und metabolischer Effekte der Ultraviolett-Bestrahlung venösen Eigenblutes bei peripheren arteriellen Durchblutungsstörungen vom Typ II - IV nach Fontain. (Rheological, haemodynamic and metabolic effects of ultra violet light irradiation of own venous blood for peripheral vascular disease II-IV) **Z. Gesamt Inn. Med.** 42: 44-50, 1987.

Key words: arterial occlusive diseases, ultraviolet therapy, blood viscosity (English abstract)

Address for reprints: Institut für Pathologische Physiologie, Friedrich-Schiller-Universität Jena, GDR.