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Abstract

In Diabetes Mellitus (DM), the presence of chronic uncontrollable hyperglycemia, fat and protein metabolic disorder and damaged blood components generate blood haemoconcentration and hyperviscosity. Blood hyperviscosity in DM patients may influence blood stream, so that it will generate and enhance the plague formation at venous wall and facilitate the thrombus formation. This, in turn, may lead to serious complications for example stroke, myocard infarction, vascular damages, kidney failure, retinopathy and the peripheral artery disease (PAD) occurance. This study objective was to find the description of blood viscosity in patients with DM. This was a descriptive observational study by taking samples that meet the sample criteria, involving 105 patients DM outpatients at Endocrine Clinic, Internal Medicine Departement, AW Sjahranie Hospital, Samarinda, from September 1st to October 1st 2009. Data were obtained from the blood viscosity tests and the patients' medical record. In 105 DM patients the blood viscosity values were between 1.8-7.3 CP with average blood viscosity of 3.9 CP (SD 0.87). Blood viscosity frequency increased (>5.1 CP) in 10 patients (9.5%), blood viscosity was normal (3.5-5.1 CP) in 59 patients (56.2%), and decreased (<3.5 CP) in 36 patients (34.3%). Blood viscosity frequency increased in patients with acquired pure DM 3 people (2.9%) and DM with hypertension was found in 7 patients (6.7%). In conclusion, factors affecting blood viscosity are hematocrit, protein plasma, temperature, blood flow, blood vessel size, blood pressure, erythrocyte, and blood components. Viscosity disorder may lead to the several vital organs damage, such as kidney, heart, brain and retina.

Keyword : diabetes, mellitus, blood, viscosity ,

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