To The Editor:

To elucidate the mechanism of granulocyte damage during FL, studies have been reported of the interaction between nylon-wool fibers and isolated granulocytes suspended in protein free media, in 5% plasma, or in 1% human serum albumin. In FL, however, heparinized whole blood is passed through a nylon-wool filter, resulting in plasma protein coating of the fibers within seconds. Cell adhesion to a plasma-protein-coated surface is a biologically active process that is fundamentally different from the passive and very firm attachment of cells to a naked, synthetic surface. Consequently, the interaction of nylon fibers and granulocytes in a protein-free medium is not a relevant model for granulocyte-fiber interaction during FL. In the presence of undiluted plasma, we observed no passive adhesion of granulocytes to glass, whereas 10% plasma and 1% human serum albumin reduced, but did not by far abolish passive adhesion. Wright and coworkers observed less lysozyme release by granulocytes attached to nylon fibers in the presence of 5% plasma than in a protein-free medium. This may be due to reduced, but probably not abolished, passive adhesion by plasma proteins coating the fibers.

Even experiments with isolated granulocytes and fibers, sufficiently coated with plasma proteins may be irrelevant to FL. We have demonstrated that granulocytes are retained from whole blood in glass-bead columns by a platelet-granulocyte interaction. Conceivably, this holds for nylon-wool fibers as well.

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Damage of granulocytes in filtration leukapheresis (FL)

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