logically important parameter under conditions approximating those in vivo. This parameter is the resistance of whole blood to flow in microscopic channels, and the simplicity of the published technique stimulated other workers to assess its clinical usefulness. Several parameters have been found to affect the flow of whole blood through small channels in vitro and our recent work was designed to quantify the contribution of some of these to retarding this flow. Among these factors are leucocyte concentration, haematocrit, plasma viscosity and red cell deformability. The first three of these are readily quantifiable and easily manipulated experimentally. Red cell deformability, however, is a picturesque concept but is not a quantitatively defined parameter. Changes in red cell deformability can only be defined as a residual change in (say) whole blood filterability after all other influencing factors have been quantitatively obviated.

On this basis we could find no evidence to support the concept of changed red cell deformability in patients with peripheral vascular disease from our whole blood filtration data. Direct comparison of filtration data between claudicant and normal subjects showed the whole blood filterability to be reduced in the former group, but the extent of reduction could be accounted for by changes in other parameters, notably the leucocyte count. Contrary to Drs Dormandy and Ernst assertion, the data in our paper show that the described relation between leucocyte count and filterability persisted for leucocyte counts below and through the normal physiological range (5-12 × 10^9/L), as well as into the pathological range. The increases in leucocyte count alone were sufficient to explain the reduction in whole blood filterability in our claudicant patients. With no residual differences in whole blood filterability demonstrable between the two subject groups, no differences in red cell deformability could be shown. Of course, the patients we selected may not have had reduced red cell deformability, but this cannot be assessed without an independent measure of this parameter.

That blood flow properties change in patients with peripheral vascular disease is unquestioned. That any of this change is attributable to altered red cell deformability in vivo has yet to be proved.