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## Letter to the Editor

# Evolution of erythrocyte aggregation in transmural myocardial infarction survivors. A 12-month follow-up study

Dear Sir,

We have read with interest the recently published article by Sargento et al. [1], regarding the haemostatic, haemorheologic and inflammatory profile in transmural myocardial infarction survivors during a 12-month follow-up period. With respect to haemorheological parameters, the authors found that plasma viscosity and fibrinogen concentration decreased over the 12-month period while haematocrit and erythrocyte aggregation significantly increased.

It is a well-known fact that, among plasmatic factors, erythrocyte aggregation is mostly influenced by fibrinogen concentration [2]. Therefore, it is hard to understand why fibrinogen and correspondingly, plasma viscosity decreased over the period and erythrocyte aggregation did the opposite. Also, they found that haematocrit-like erythrocyte aggregation increased over the study period. In this respect the authors, in the methods section, did not specify, whether erythrocyte aggregation was determined at native or at a 45% corrected haematocrit. If they did not work at a corrected haematocrit, the cause of having found an increasing erythrocyte aggregation over the follow-up period might be related to the haematocrit effect which has a paramount influence on erythrocyte aggregation [2–6].

Also, when they try to explain the reason for this increase, over the 12-month follow-up, they suggest that "the cause might be due to increased red blood cell rigidity over the time which could explain the increase in erythrocyte aggregation". In this respect, more rigid erythrocytes would have an opposite effect on erythrocyte aggregation, i.e. it would cause a decrease rather than an increase [7–9]. Several authors have found that a loss of deformability may reduce erythrocyte aggregation, as it requires a deformable red blood cell to aggregate [2,10,11].

We suggest, therefore, that in the recently published article by Sargento et al. [1], the haematocrit at which erythrocyte aggregation was performed needs to be mentioned, and, they should look for causes, other than the supposed increased erythrocyte rigidity, to explain the increased erythrocyte aggregation over the study period (e.g., red blood cell $Ca^{2+}$-ion concentration, etc. [12]).

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