Role of fibrinogen–erythrocyte and erythrocyte–erythrocyte adhesion on cardiovascular pathologies

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Role of fibrinogen–erythrocyte and erythrocyte–erythrocyte adhesion on cardiovascular pathologies

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ABSTRACT
Cardiovascular pathologies are the major cause of death worldwide. Erythrocyte aggregation is an indicator of cardiovascular risk, which is influenced by high plasma fibrinogen levels. Our main goals were to understand how fibrinogen–erythrocyte binding influences erythrocyte aggregation and how it constitutes a cardiovascular risk factor in essential arterial hypertension (EAH) and chronic heart failure (CHF).

Differences on cell stiffness, protein-cell interaction and cell–cell adhesion forces were evaluated by AFM-based force spectroscopy with cells from 31 EAH patients, 30 CHF patients and 15 healthy blood donors. The main procedures used were previously described by us [1–3]. Results were correlated with patients’ clinical profiles. From cell–cell adhesion studies, we concluded that, upon increasing fibrinogen concentration (from 0 to 1 mg/mL), there was an increase in the work and force necessary for erythrocyte–erythrocyte detachment on EAH patients and healthy donors. Nevertheless, higher values from both parameters were obtained for EAH patients, when comparing to healthy donors, at each fibrinogen concentration [4]. Fibrinogen-erythrocyte (un)binding forces were higher in EAH and in CHF patients, when compared with the control group, despite a lower binding frequency [5,6]. Ischaemic CHF patients showed increased binding forces compared to non-ischaemic patients. A 12-month clinical follow-up shows that CHF patients with higher fibrinogen–erythrocyte...
Satisfaction with nursing care: influence of sociodemographic factors on a sample of hospitalised children

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**ABSTRACT**

**Introduction:** Patient satisfaction is identified as an indicator of the right to health \cite{1}. Traditionally, children's satisfaction with health care is not regularly accessed \cite{2} however, in recent years, it has been increasingly studied \cite{3}. This study aims to identify if sociodemographic factors, such as sex, age and reason for hospitalisation, influences satisfaction with nursing care, in a sample of school-aged children (7–11 years).

**Materials and methods:** An observational, cross-sectional, exploratory-descriptive study with a non-probabilistic and accidental sample was performed. Data were collected through the "Children Care Quality at Hospital" instrument, after translation and validation to Portuguese. The instrument includes three domains: nurse characteristics, nursing activities and nursing environment. Also, children were asked to rate global satisfaction with nursing care from 1 (less satisfied) to 5 (more satisfied). Statistical analysis was performed using SPSS statistical tool (version 24.0). Authorisation was obtained from National Data Protection Commission as well as ethics committees in each of the 6 health institutions were the study was applied.

**Results:** The sample \((n = 252)\) includes mainly boys (52.8\%, \(n = 133\)) with 8.9 years (SD = 1.4) as mean age and most children had unscheduled admissions (84.6\%; \(n = 209\)). Global nursing care (1–5) was rated with a score of 4.51 (SD = 0.645). There was no significant difference between sex \((r = -0.08; p > .05)\), age \((r = -0.49; p > .05)\) or scheduled/unscheduled admissions \((r = -0.59; p > .05)\) and the score attributed by children.

**Discussion and conclusions:** In this sample, school-aged children are satisfied with nursing care provided during hospitalisation. Sociodemographic factors seem to have effect on overall satisfaction in previous studies with better scores of satisfaction in: older patients \cite{4}, male patients \cite{4,5} and unscheduled admissions \cite{6}. Nevertheless, this was not verified in our sample. We suggest that further studies should be developed with larger samples and different group age.

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