**Biostatistician Review Report**

The statistical analysis during the study “Influence of breathing movements and Valsalva maneuver on Vena Caval dynamics” by Laborda A *et al.* was carried out by the SPSS 17 software (SPSS. Chicago, Illinois). An α-error of 0.05 and a power of 90% was established.

The data were tested for normality using the Kolmogorov–Smirnov test.

Means were compared using Student's *t* test for paired samples, to investigate possible significant differences of the means for characteristics like areas and pressures between the two respiration modes (neutral respiration and Valsalva maneuver). Significant differences (p<0.001) of the inferior vena cava areas were observed between neutral breathing and Valsalva, in all levels studied (suprarenal, juxtarenal and infrarenal). Also, the venous pressures were statistically different during the two respirations modes, in all three levels (p<0.001). The standard deviation of the venous pressures in Valsalva measurements was significantly higher than in neutral breathing (p<0.001).

The Pearson's correlation coefficient was used to investigate correlation between areas and pressure. There was a negative correlation between cross sectional caval area and venous blood pressure, but it is not statistically significant in any of the cases. The collapsibility index is quite constant and independent from the final pressure in Valsalva.

There was no influence by the individual's constitutional type expressed in the constitutional mass index or age or sex.

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