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ABSTRACT BOOK

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"Precision medicine for healthy ageing"

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Prof. Lina Badimon

Prof. Gema Frühbeck

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Conclusions: Use of proven-efficacy pharmacological treatment in ACS patients improved from 2000 to 2010, and was associated to a better outcome at discharge.

P115-T | Influence of pathology of auditory analyzer on cardiac output

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Congenital disorders of the auditory analyzer can influence the functioning of other physiological systems. The cardiac output of young people with disorders of hearing was studied in comparison with healthy people similar parameters.

The cardiac output from the left ventricle into the aorta was measured using Ultrasound Cardiac Output Monitor (USCOM, Australia) in young people 20–25 years old with disabilities having a pathology of hearing. The first group (gr.1) included young people completely devoid of hearing and with IV degree of hearing loss. The second group (gr.2) included young people with disorders of the auditory analyzer having I-III degrees of hearing loss. Healthy young people participated in the study as control group (gr.contr.) The AV (aortic valve) examination mode was selected on the monitor for aortic measure. The transducer was placed with the appropriate localization for this mode (suprasternal position). All the measurements were performed at rest.

Significant differences were revealed between the indicators of the minute distance (MD) ($P \leq 0{\cdot}05$), cardiac output (CO) ($P \leq 0{\cdot}05$) in gr.1 and gr.contr. These indicators were as follows: MD (Gr.1) – 26·71 ± 3·59 m/min; MD (Gr.2) – 16·58 ± 3·95 m/min; MD (Gr.contr.) – 17·33 ± 2·27 m/min; CO (Gr.1) – 7·81 ± 1·00 L/min; CO (Gr.2) – 5·36 ± 1·38 L/min; CO (Gr.contr.) – 5·16 ± 0·52 L/min.

The obtained data may indicate the influence of pathological processes in the hearing organs on the normal development of the cardiovascular system.

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P116-T | Angiographic predictors of experimental infarct size in a swine model of reperfused myocardial infarction

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Background: To realize the exciting potential of cardiac regenerative therapies rigorous translational models must be used. Swine infarct models are widely used for this purpose. However, the infarct sizes obtained via balloon occlusion of the porcine LAD are highly variable.

We set out to study the relationship between the anatomical features of the porcine LAD and the size of infarction (IS) measured with MRI at 1 week.

Material and methods: Twenty-four pigs surviving a 90 minutes balloon occlusion of the mid-LAD were used for this study. The following angiographic parameters were considered: Number of branches present, number of branches occluded, level of occlusion (expressed as percentage of arterial length occluded), presence of a distinct "ramus intermedius" and animal weight.

The relationship between these parameters and IS as measured by DE-MRI on day 7 after induction was studied using non parametric correlations and lineal regression. Moreover, an inclusion criterion of IS > 15% was defined and the capability of these variables to predict whether animals were going to meet it was determined using logistic binary regression.

Results: Significant correlations were found between IS and the number of branches present ($P = 0{\cdot}004$) and the number of branches occluded ($P = 0{\cdot}003$), while no correlation could be evidenced with the other parameters. However, while significant ($P = 0{\cdot}024$), lineal regression model could only predict 30% of observed IS. Logistic binary regression yielded a significant ($P = 0{\cdot}014$) model that could correctly predict 75% of cases, with 72·7% specificity and 76·9% sensitivity. While further work is needed to refine the model, with this tool a single angiographic procedure could be used to predict the probability of an experimental subject not meeting the inclusion criterion, thus allowing greater ethical refinement of the infarction procedure by decreasing the amount of animals used that will be discarded due to insufficient IS.