compared to 9 months (95% CI: 4, 14) for those with systolic dysfunction.

Conclusion: Mortality from diastolic dysfunction in African-American patients is not significantly different from that due to systolic dysfunction, corroborating that which has been reported earlier in the general population. We found a high mortality rate at the 3 year follow-up period in this subset of patients which could possibly be explained by a higher incidence of comorbid conditions like diabetes.

Key Words: African Americans, diastolic heart failure, mortality

P-141
AGE-STAGE SPECIFIC DIFFERENTIAL ACTIVATION OF p38 MITOGEN ACTIVATED PROTEIN KINASE AND APOPTOSIS IN HYPERTENSIVE RATS
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Mitogen activated protein kinases (MAPK) are involved in the early development of cardiac hypertrophy but their roles are still unclear in cell fate decision. Recently we have determined the differential activation of caspase-3 (C-3) in spontaneously hypertensive rats (SHR) and its specific role in hypertrophy (H) and heat failure (HF). In this regard we correlated the activation of C-3 and p38 MAPK's during life time in SHR.

Methods: Western Blotting: Left ventricles were removed, lysed and protein were separated by SDS-PAGE and electroblotted onto nitrocelulose. An antibody that recognises 32 kDa procaspase and 20 kDa C-3, was detected with chemilumiscense autoradiography.

Since MAPK cascades are activated by phosphorylation events, a p38 specific phosphorylated antibody was used to detect activated p38. C-3 / procaspase-3 ratio was considered an index of C-3 activation. Digitised images were analysed with Diversity Database analysis software.

Results: p38 activation is highly elevated in the early period of hypertrophy (20 weeks of age) where C-3 activation is also increased and also during decompensation period (60-80 weeks of age) during which C-3 activation is attenuated.

Conclusions: In SHR chronic pressure overload induces C-3 dependent apoptosis in the early hypertrophic period probably due to p38 activation. In this chronic period the role of p38 phosphorylation suggests a pro-apoptotic effect in contrast to the late decompensation and failure period during which appears anti-apoptotic.

The mismatch of p38 and C-3 induced apoptosis might be age related.

Key Words: Apoptosis, necrosis, SHR hypertrophy

P-142
COURSE OF APOPTOSIS, NECROSIS AND HEAT SHOCK PROTEIN 72 EXPRESSION IN SPONTANEOUSLY HYPERTENSIVE RATS DURING LIFE TIME FOLLOW UP
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Loss of myocytes is an important mechanism in the development of cardiac failure, consistent with the contributing variables of apoptosis (A) and necrosis (N). In this study, we evaluated the role of the 72 kDa inducible heat shock protein (HSP72) expression as an endogenous protective mechanism in life time follow up (10-100 weeks) of spontaneously hypertensive rats (SHR).

Methods: Hearts were excised from SHR, formalin fixed, and layers of left ventricle (LV) were stained: for the detection of apoptosis using the TUNEL and Hoechst double-labelling, and for the detection of necrotic areas using haematoxylin and eosin stain.

Hsp72 expression was evaluated after immunostaining with anti-HSP72 monoclonal antibody.

Results: High incidence of A was detected in young SHR 10-20 weeks of age as well as in old SHR 70 weeks, in contrast to HSP72 which had an inverse induction with a high peak at 50 week and low levels at younger and older ages.

N was found to reach a peak value at 80 week and diminishing thereafter.

Conclusions: HSP72 expression is attenuated with the increase of hypertrophy and diminishes with age.

A in LV appears to be inversely correlated to HSP72.

N rate is increased as A is reduced suggesting that more cardiomyocytes die by necrosis after inhibition of A.

Key Words: Apoptosis-necrosis, heat shock proteins, heart failure - hypertrophy - SHR

P-143
CARDIAC GENE EXPRESSION OF NATRIURETIC PEPTIDES IN DIFFERENT FORMS OF EXPERIMENTAL LEFT VENTRICULAR HYPERTROPHY
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Objective: In left ventricular hypertrophy increased ventricular expression of several genes, including atrial- and B-type natriuretic peptide (ANP, BNP) and adrenomedullin (AM) has been reported. However it