diastolic function and clinical status between patients with asymmetrical apical and septal HCM.

Methods: A total of 25 patients, mean age 58±19 years, 10 apicalis (AHCM), 16 obtrusive asymmetrical septal (OAS) and 14 non-obtrusive asymmetrical septal (NOAS) groups were studied. NYHA I: 70%, II: 22% and III 8%. Diastolic function was studied, with assessment of mitral patterns and pulmo-
nary veins, and estimation of left ventricular filling pressures (LVFP) by the mitral E (E) and tissue E (E') ratio. Results: 80% of patients with AHCM had normal diastolic function assessed by all the echocardiographic parameters. In the OAS group, no patient had normal diastolic function, and in the NOAS group only 5% had completely normal diastolic function. The AHCM group had significantly lower left ventricular filling pressures and higher tissue E velocities than the other groups (AHCM E:E' = 10, 17 in OAS vs 13 in NOAS and AHCM E': 8 cm/s vs 2.5 in OAS and 6.5 in NOAS. Regarding presence of symptoms, only 20% of AHCM had symptoms unlike the other groups which exceeded 40%. Conclusion: AHCM presents lesser diastolic function involvement than asym-
metrical septal HCM. These data support the concept that apical hypertro-
phy has a lesser influence on ventricular relaxation than hypertrophy located in other segments.

260 Early impairment of left ventricular diastolic function in patients with non-end stage idiopathic pulmonary fibrosis

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Purpose: To investigate the prevalence of diastolic dysfunction in patients with b-thalassemia major evaluated by NTproBNP levels and doppler diastolic index

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Results: LV ejection fraction was similar in b-thal and controls. NT pro BNP levels were higher in thalassemic patients compared with the controls (465±176 vs 279±46 fmol/ml, p<0.001). This increase becomes evident in the 3rd and 4th decade of life (1st 339±115, 2nd 316±142, 3rd 502±158, 4th 505±158, 5th 537±165 fmol/ml, Anova 0.003, 2nd vs 3rd, p<0.01). E/E' ratio was also significantly higher in b-thal pts (10.6±4.0 vs 6.6±1.0, p<0.001) well correlated with NT pro BNP levels (r: 0.49, p<0.001). This increase becomes significant only during the 4th decade of patients' life (1st 6.9±0.8, 2nd 8.5±1.5, 3rd 10.3±4.3, 4th 11.2±2.6, 5th 14.2±6.2, Anova 0.008, 1st vs 4th p<0.04).

Conclusion: Patients with E/E' ratio values 8-15 had similar NT proBNP levels to those with E/E'>15 (516±177 vs 565±114 fmol/ml) and significantly higher than those with E/E'<8 (516±177 vs 354±119, Anova p<0.05).

262 Levosimendan improves diastolic functions in patients with ischemic heart failure

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Purpose: Unlike the conventional positive inotropics, it is suggested that levosimendan does not impair diastolic functions since it does not increase intracellular calcium levels. However, the effects of levosimendan on diastolic functions were not supported with objective echocardiographic evidence comparing them with other positive inotropics. In this prospective, random-
ized, double-blind study the effect of levosimendan on diastolic functions were evaluated in comparison with dobutamine in patients with ischemic heart failure.

Methods: Patients having an acute heart failure attack with ischemic cardiomyopathy and with a LV EF <40% were included to the study. Patients were randomized to levosimendan (12-24 µg/kg loading, 0.1 µg/kg/min 24-hours infusion, mean age: 46±10 years, n=30, 63% male) and to dobutamine groups (5-10 µg/kg/min 24-hours infusion, mean age: 66±8 years, n=32, 54% male). From the mitral inflow before and 24 hours after the treatment E and A wave velocities, E/A ratio, deceleration time (DT) of the E wave and isovolumetric relaxation time (IVRT) were measured by PW Doppler and mitral lateral annular Em wave velocities were measured by tissue Doppler. Results: All of the baseline diastolic parameters, age, gender, concomitant medications were similar in both groups (p>0.05). After the treatment, E/A ratio were significantly lower in levosimendan group whereas Em and A wave velocities and IVRT were found to be higher (Table). There was no sig-
ificant change in DT after levosimendan (Table). There were no significant difference in all of the diastolic parameters after treatment in dobutamine group. Conclusion: Levosimendan improves diastolic functions as it exerts posi-
tive inotropic effects in ischemic heart failure patients with restrictive filling pattern.

Table 1

Levosimendan

Dobutamine

E (cm/s) 101.5±21/89.16 p=0.004 107.8±30/92.3 p<NS

A (cm/s) 46.7±19/28.5±17 p=0.001 56.0±17/27.8 p<NS

E/A ratio 2.3±0.1/4.0±0.5 p<0.001 2.1±0.8/2.4±1.3 p<NS

DT (ms) 132±36/140±30 p<NS 130±34/136±32 p<NS

IVRT (ms) 88.3±23/75±22 p=0.003 92±17/89±13 p<NS

Levosimendan

Dobutamine

E (cm/s) 7.8±0.7/9.0±1.8 p=0.002 8.1±0.3/7.7±1.3 p<NS

A (cm/s) 46.7±19/28.5±17 p=0.001 56.0±17/27.8 p<NS

E/A ratio 2.3±0.1/4.0±0.5 p<0.001 2.1±0.8/2.4±1.3 p<NS

DT (ms) 132±36/140±30 p<NS 130±34/136±32 p<NS

IVRT (ms) 88.3±23/75±22 p=0.003 92±17/89±13 p<NS

Table 2

Dobutamine

E (cm/s) 7.8±0.7/9.0±1.8 p=0.002 8.1±0.3/7.7±1.3 p<NS

A (cm/s) 46.7±19/28.5±17 p=0.001 56.0±17/27.8 p<NS

E/A ratio 2.3±0.1/4.0±0.5 p<0.001 2.1±0.8/2.4±1.3 p<NS

DT (ms) 132±36/140±30 p<NS 130±34/136±32 p<NS

IVRT (ms) 88.3±23/75±22 p=0.003 92±17/89±13 p<NS

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