

Group B was treated with carvedilol (same dosage) and CK at a dosage of 50 mg o.i.d.

Cardiac volumes and ventricular function were assessed by echo at baseline and after 3 and 6 weeks. Quality of life was measured with MLHF questionnaire.

Results: Left ventricular end-diastolic volume (LVEDV) was increased in B group less than in A group after three weeks ($p < 0.05$) and in B group was under baseline values after six weeks ($p < 0.001$). Left ventricular ejection fraction (EF) after three and six weeks in B group is always greater than A group ($p < 0.001$).

Left ventricular ejection fraction

	Baseline		III Week		VI Week
Group A	0.33 ± 0.02	**	0.30 ± 0.02	**	0.31 ± 0.02
Group B	0.33 ± 0.03	*	0.32 ± 0.03	**	0.35 ± 0.03

° ns; * $p < 0.05$; ** $p < 0.001$

MLHF questionnaire was better in B group ($p < 0.05$).

Conclusions: Canrenoate potassium, diuretic with positive neurohormonal action, is useful in patients with heart failure treated with carvedilol, reducing the beta-blocker adverse effects during the first weeks.

P59/10371 Bisoprolol reduces episodes of ventricular tachycardia and sudden cardiac death in subjects with chronic heart failure

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Sixty-five subjects with mild to moderate chronic heart failure were randomized to receive treatment: 32 or them ACE inhibitors, diuretics and digitalis and 33 of them the same treatment plus Bisoprolol (21 subjects 5 mg of Bisoprolol and 12 subjects 10 mg of Bisoprolol). After a two-week up-titration period, subjects remained on study medication for a period of 6 months. The primary efficacy parameter was the number of ventricular tachycardia episodes registered on 24 h Holter monitoring each two months. There was an improved reduction in ventricular tachycardia episodes in the Bisoprolol group ($p < 0.03$). There was also an improvement in survival in all causes of death (respective crude mortality rate of 6.2% in the Bisoprolol group compared with 14.3% in the placebo group, $p < 0.01$). Bisoprolol lowered most the risk of sudden cardiac death 69% ($p < 0.001$) compared to pump failure and other causes of cardiovascular death.

It can be concluded that in subjects with mild to moderate heart failure from systolic dysfunction, Bisoprolol produces a reduction of ventricular tachycardia episodes, reduction of mortality and mostly reduction of sudden cardiac death.

P60/10405 Dosage of ACE-inhibitors, diuretics and digitalis for the treatment of congestive heart failure given by general practitioners in teh province Styria in Austria

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Introduction: Congestive heart failure (CHF) is one of the most common reasons for hospitalisation. Therefore, the medical treatment according to the guidelines is necessary to prevent worsening of stable CHF.

The aim of the study was to evaluate the dosing of ACE-inhibitors, diuretics and digitalis for the treatment of CHF by general practitioners (GPs) in the province Styria in Austria.

Methods: Surveys examining the dosage of ACE-inhibitors, diuretics, and digitalis were sent to all 827 GPs in the province Styria.

Table 1: ACE-inhibitors

	Low	Medium	High
Enalapril (90%)	42%	42%	11%
Lisinopril (88%)	39%	41%	11%
Ramipril (82%)	29%	47%	6%
Captopril (74%)	46%	27%	2%

Table 2: Diuretics

	Low	Medium	High
Furosemide (94%)	50%	48%	5%
Xipamide (76%)	14%	61%	3%
Thiazide (71%)	11%	60%	1%
Spironolactone (70%)	39%	30%	2%

Table 3: Digitalis

	Low	Medium	High
Digitoxin (86%)	10%	85%	1%
Methylidigoxin (83%)	10%	80%	2%
Acetyldigoxin (82%)	21%	63%	0%
Digoxin (51%)	15%	38%	0%

Results: Questionnaires were returned by 253 (31%) of the GPs. Dosages of the medications are classified to low, medium and high. Beside the substance-name there is the frequency of usage. The difference to 100% is determined by incomplete answers or by multiple nomination.

Conclusion: Dosages of ACE-inhibitors and diuretics are mostly low to medium, dosage of digitalis is medium most frequently. The dosages of ACE-inhibitors correspond in about 2 to 11% with the recommended (high) doses and are in accordance with those found in international surveys. Given these results we conclude that there is space for improvement of treatment of CHF by Styrian GPs.

P61/10456 Limitation of the excessive extracellular matrix turnover is a major determinant of the beneficial effect of spironolactone on survival in patients with CHF: Insights from the RALES trial

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Background: In congestive heart failure (CHF), extracellular matrix turnover is a major determinant of cardiac remodeling, diastolic function and pumping capacity. It may be monitored by measuring the serum level of procollagen type III aminoterminal peptide (PIIINP). Animal studies suggested that spironolactone (SPIRO), an aldosterone receptor antagonist may decrease cardiac and vascular fibrosis. Thus, we studied the prognostic significance of PIIINP and its changes during chronic treatment with SPIRO.

Methods: A sample of 261 patients from the RALES trial participated in this substudy (CHF NYHA III and IV, mean age 69, LVEF = 26%, ischemic heart disease = 46%, all were on conventional therapy -92% on ACE inhibitors-). Patients were randomized to placebo or SPIRO 12.5 to 50 mg daily. Serum PIIINP was measured at baseline and 6 months after randomization. Mean survival follow up was 24 months. ANOVA and multivariate Cox survival model were used.

Results: Baseline serum PIIINP level was 5.0 $\mu\text{g/l}$ and was similar in the SPIRO and placebo group. At 6 months it decreased in the SPIRO (-17%, $p = 0.004$), but not in the placebo group. Baseline level > 3.85 $\mu\text{g/l}$ was associated with an increased risk of death only in the placebo group (RR = 2.36 [1.34-4.18], $p = 0.003$). On the other hand, survival benefit from SPIRO was clustered to patients with above median baseline PIIINP levels (RR = 0.53 [0.35-0.82] vs 0.90 [0.58-1.40]). These findings were unchanged after adjustment for other prognostic factors.

Conclusion: In patients with CHF, elevated serum PIIINP was significantly associated with excess mortality. SPIRO decreased serum PIIINP and nearly suppressed the excess death risk related to high PIIINP level. It is suggested that limitation of the excessive extracellular matrix turnover is a major determinant of the beneficial effect of SPIRO on survival in patients with CHF.

P62/10460 The acute effect of lisinopril upon left ventricular function in patients with dilated cardiomyopathy

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Angiotensine converting enzyme inhibitors (ACEI) are frequently used in patients (p) with congestive heart failure (CHF), especially dilated cardiomyopathy (DCM). During chronic use ACE improve LV systolic function but the acute effect of ACEI upon LV systolic and especially diastolic function, is less studied, this being the purpose of the present study.

There were studied 25p with DCM, 16 in sinus rhythm and 9 with atrial fibrillation. Any patient wasn't treated with ACEI the 7 days before the study. An echo Doppler examination was done and LV systolic and diastolic parameters were determined. The examination was repeated 7 hour after administration of a single oral dose of 10 mg lisinopril.

Ejection fraction raised from 37.91 to 45.39% ($p < 0.05$) and shortening