Abstracts

H010

ROUTINE IN-HOSPITAL CARE AND PROGNOSIS OF ELDERLY PATIENTS WITH HEART FAILURE

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Heart failure (HF) affects more than 15 million people in Europe and North America. Most of the studies performed in HF patients have been conducted in middle-aged adults. However, patients with HF are mainly elderly patients in whom management is complicated by comorbid conditions and the risk of adverse drug reactions. Little is known about the quality of care among this population. The aim of this prospective and multicenter study was to describe the in-hospital management in routine clinical settings of elderly patients over 75 years presenting to the emergency department with pulmonary edema.

During the 12-month study period, 398 patients were enrolled in five French emergency departments. 96% had at least one major comorbid condition and the prevalence of cognitive impairment was high (63% of patients with a Mini Mental State Examination, MMSE<20). 33.6% of patients were admitted to cardiology units and 66.3% to non-cardiology departments. Admission in cardiology departments (33.7%) was associated with previous cardiology assessment (OR, 2.32, 95%-CI, 1.33-4.07), prior coronary artery disease (OR, 2.39, 95%-CI, 1.47-3.87), elevated troponin (OR, 1.67, 95%-CI, 1.03-2.70) and functional independence (OR, 1.57, 95%-CI, 0.96-2.57). By contrast, cognitive impairment (OR 0.39, 95%-CI, 0.24-0.62) was associated with noncardiology department admission. 64.1% of patients admitted to cardiology department underwent echocardiographic assessment versus 23.7% of the others (p<0.01). A preserved left ventricular ejection fraction (>55%) was found in 70.5% of patients. Recommended treatments were under-prescribed at admission (48.1%) and were more likely to be delivered at discharge to patients admitted to cardiology departments (OR, 1.51 (95%-CI, 1.01-2.23). In-hospital mortality (11.0%) was not associated with department speciality. However, the two years survival of patients treated with recommended medications at discharge was significantly improved compared with patients treated by symptomatic drugs.

Conclusion — Routine care of HF was dependant on noncardiology factors (e.g. cognitive impairment) in this elderly population and aimed symptom relief rather than compliance with guidelines which reduce mortality. Our findings suggest that the institution of protocols to standardize care could improve compliance with guidelines and long-term outcomes.

H011

AORTIC VALVE REMPLACEMENT NORMALIZES SYMPATHETIC NERVE ACTIVITY IN PATIENT WITH SEVERE AORTICV STENOSIS

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Introduction — In patients with aortic stenosis, reduced cardiac output may increase sympathetic nerve activity. However, the magnitude of the increase in sympathetic activity in such patients and the effect of valve replacement (VR) on this activity are unknown.

Methods — In this preliminary study, we prospectively included 24 patients (mean age = 76±8.7 years) with severe aortic stenosis (defined for <0.60 cm²/m²). Holter-EKG recording (lasting 24 hours) allowed heart rate variability analysis (temporal and spectral parameters) and QT dynamicity calculation. The latter was assessed by plotting QT and RR intervals to obtain a liner characterized by its slope linear. 24-h Holter recordings, clinical, biological and morphological data were collected before and after aortic valve replacement.

Results — Valve replacement induced a significant improvement in cardiac output. Holter EKG parameters evaluating the sympathetic nervous system activity showed a decrease of SDNN, VLF and LF. Hence, SDNN/5mn, effecting sympathetic modulation of heart rate, calculated on 24hours significantly decreased after aortic valve replacement (42,1±25,0 to 27,27±24 ms; p<0.05). Significant changes of EKG parameters are summarized in table below (* for p<0.05). None of parameters evaluating QT dynamicity were significantly modified after aortic valve replacement.

<table>
<thead>
<tr>
<th>Parameters (ms²)</th>
<th>Before VR</th>
<th>After VR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total power 24h</td>
<td>7,0±1,3</td>
<td>5,9±1,3 *</td>
</tr>
<tr>
<td>Total power day</td>
<td>6,9±1,3</td>
<td>6,0±1,5 *</td>
</tr>
<tr>
<td>Total power night</td>
<td>7,1±1,3</td>
<td>5,7±1,1 *</td>
</tr>
<tr>
<td>VLF (Very low frequency) 24 h</td>
<td>6,4±1,1</td>
<td>5,2±0,7 *</td>
</tr>
<tr>
<td>VLF day</td>
<td>6,3±1,1</td>
<td>5,2±0,8 *</td>
</tr>
<tr>
<td>VLF night</td>
<td>6,6±1,3</td>
<td>5,0±0,7 *</td>
</tr>
<tr>
<td>LF (Low frequency) 24 hours</td>
<td>4,9±1,7</td>
<td>3,8±1,5 *</td>
</tr>
<tr>
<td>LF night</td>
<td>5,0±1,5</td>
<td>3,5±1,6 *</td>
</tr>
</tbody>
</table>

Significant changes of EKG parameters after VR (* for p<0.05)

Conclusion — This study shows for the first time the beneficial effect of aortic valve replacement on the sympathetic nervous tone. We plan to follow up these patients and assess occurrence of cardiovascular complications (i.e. Heart failure, atrial fibrillation). Complimentary results will allow us to identify SNS measurement.