as well as creatinine, cystatin C, blood NGAL, urinary NGAL and electrolytes was also obtained. AKI was defined by an increase in creatinine ≥ 0.3mg/l relative to the admission level. Exclusion criteria was eGFR < 15ml/min/1.73m² and atrial fibrillation.

Results: among the 26 included patients, AKI occurred in 8 patients at day 3 and in 10 patients at discharge. Mean RRI values were 0.71±0.08 on admission, 0.71±0.09 at day 3 and 0.74±0.08 at discharge. RRI was related to age, creatinine and cystatin C (p≤0.05 for all) but not to other clinical or echocardiographic variables or BNP or NGAL levels. Only admission RRI was significantly associated with AKI at day 3 (table) as well as RRI at day 3 for AKI at discharge (0.77±0.07 vs 0.67±0.8; p=0.02).

Conclusion: this pilot study describes RRI values as well as its early changes and determinants during AHF. Doppler-derived RRI measurement appears to be a relevant tool for predicting AKI.

Abstract 0163 – Table

<table>
<thead>
<tr>
<th>Admission variables</th>
<th>No AKI</th>
<th>AKI</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td>60±17</td>
<td>69±14</td>
<td>0.29</td>
</tr>
<tr>
<td>LVEF</td>
<td>25±8</td>
<td>33±17</td>
<td>0.78</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>122±18</td>
<td>118±19</td>
<td>0.63</td>
</tr>
<tr>
<td>eGFR</td>
<td>62±24</td>
<td>52±20</td>
<td>0.35</td>
</tr>
<tr>
<td>Cystatin C</td>
<td>1.4±0.6</td>
<td>1.8±0.7</td>
<td>0.08</td>
</tr>
<tr>
<td>NGAL blood</td>
<td>125±84</td>
<td>147±130</td>
<td>0.76</td>
</tr>
<tr>
<td>NGAL urinary</td>
<td>13±17</td>
<td>9±4</td>
<td>0.79</td>
</tr>
<tr>
<td>BNP</td>
<td>197±1815</td>
<td>156±881</td>
<td>0.95</td>
</tr>
<tr>
<td>IRR</td>
<td>0.68±0.08</td>
<td>0.76±0.06</td>
<td>0.03</td>
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</tbody>
</table>

0326 Prediction of right ventricular failure after cardiac transplantation: a recipient transcriptomic study

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Background: Right ventricle failure (RVF) is a frequent and severe complication after cardiac transplantation. However, risk stratification for RVF is poorly achieved. Development of transcriptomic biomarkers for outcome prediction in cardio-vascular diseases is promising.

Aim: To identify right ventricular gene expression signature associated to RVF and to define a transcriptomic biomarker that could predict post-transplantation RVF.

Methods: Recipient RV myocardial samples of 44 patients transplanted from February 1998 to November 2002 in our center were collected. We retrospectively identified patients with (RVF group) and without (CTL group) post-transplantation RVF.

A 4035-gene expression profile was obtained for all patients. Differentially expressed genes between RVF and CTL groups were identified and a molecular RVF predictor was used to determine for each patient a RVF prediction score (RVS).

Results: 9 (20%) and 18 (41%) patients were classified in RVF and CTL groups respectively. As compared to CTL group, RVF patients showed higher pre-operative bilirubin level and higher post-operative death rate. Molecular RVF predictor included 75 differentially expressed genes. Using this predictor, risk for post-transplantation RVF was 2.8-fold greater if RVF score >0.5 (CI 95%: 1.243-6.305).

Conclusion: Gene expression profiling of recipient right ventricle could be used to predict post-transplantation RVF. Transcriptomic biomarkers should be further investigated as a new tool for selection of cardiac transplant candidates.

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0381 Heart failure and mechanical circulatory support: experience of a “medico-surgical unit”

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With the shortage of grafts, mechanical circulatory support has emerged as an alternative to heart transplantation. This activity requires a multidisciplinary team specialized in the treatment of heart failure.

This is a single-center prospective cohort of patients under long-term intracorporeal and continuous-flow left assist device type HeartMate II, between January 2008 and January 2014.

Thirty-four devices were implanted in 30 men (88.2%) and 4 women (11.8%) with a mean age of 57.8 years. It concerned ischemic cardiomyopathy in 25 cases (73.5%) and primitive dilation in 9 cases (26.5%). The objective was a « destination therapy » in 11 patients (32.4%) and a « bridge-to-transplant » in 23 patients (67.6%). The 30-day mortality was 4 cases (11.8%), with 11 deaths (32.4%) with a 1-year survival of 40-50%. Right ventricular failure, defined by the use of inhaled nitrogen monoxide > 48 hours and/or inotropes >14 days, appeared in 14 cases (41.2%). Associated factors were: young age, high pulmonary arterial resistances and right pressures, increased bilirubin and cavitary dilatation. The mean duration of intubation was 5 days and ICU stay of 13.2 days.

Initial sutures were marked by 6 surgical re-openings for bleeding (17.6%), 5 acute renal failures requiring dialysis (14.7%) and 10 acute respiratory distress (29.4%). Follow-up was performed in a dedicated unit, with functional, ultrasound and rthymological assessment, dietary and psycho-social support, and finally therapeutic education. The main late complications included 4 strokes (11.8%), ischemic or haemorrhagic, and 9 driveline infections (26.5%). Two patients were transplanted, two others are on waiting list.

Thanks to close collaboration between cardiologists and surgeons, the management of patients with en-stage heart failure has improved with our growing experience in the field of long-term assistance.

0399 Mechanical circulatory support and infection: a single center experience

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With the shortage of grafts, mechanical circulatory support has emerged as an alternative to heart transplantation. But one of the main disadvantages is the percutaneous source of energy that exposes to the risk of infection.

We studied driveline infections occurred in a single-center prospective cohort of patients with long-term intracoronary and continuous-flow left assist device type HeartMate II, between January 2008 and January 2014.

Among the 34 devices implanted, we identified 9 cases of infection of the power cable (26.5%). The diagnosis was defined by the combination of a positive bacteriological sample with local inflammatory signs, ranging from skin redness to frank pus. The germs found included: 5 aureus staphylococci, 3 white staphylococci, 3 gram-negative bacilli including a pseudomonas aeruginosa, and a citoactor. The median time to onset of infection was 15 months, ranging from 3 weeks to 2.5 years after implantation. Associated factors were: surgical re-opening, prolonged ICU stay, acute renal failure, the existence of a concomitant infection, malnutrition, duration of assistance and dressing changes at home. The treatment was based on a broad-spectrum antibiotics, secondarily adapted to the antibioticogram and long lasting. Among these patients, two were transplanted, including one in the context of a Type 2 Super Emergency, two others died of a non-infectious cause, one patient is now cured and four are still carrying a chronic related-device infection.

The management of end-stage heart failure has improved thanks to our growing experience in the field of long-term assistance, but the driveline infection is a major complication. It greatly affects the quality of life of the patients and transplantation may be the only prospect of recovery.