**FRI0501**

CARDIOVASCULAR DISEASE RISK ASSESSMENT IN PATIENTS WITH FAMILIAL MEDITERRANEAN FEVER RELATED AMYLOIDOSIS

M. Romano1, M. Yilmaz2, B. Jackson3, C. Ackiel4, D. Piskin5, R. Berend6, E. Demirkaya7, 1Istituto Ortopedico Gaetano Pini, Milan, Italy; 2Epidemiogenetic Health Solutions, Ankara, Turkey; 3Western University, London, Canada; 4Clinical Research International, Cologne, Germany

**Background:** FMF is an autosomal recessive disorder. Systemic inflammation in autoinflammatory disorders cause secondary systemic AA amyloidosis, which has been suggested as an important contributing factor to the excess cardiovascular disease (CVD) risk in patients with FMF.

**Objectives:** Our aim was to investigate the CVD-related clinical outcomes in patients with FMF-related amyloidosis and to define risk factors for CVD events (CVDs).

**Methods:** A cross-sectional evaluation with prospective follow-up of consecutive patients with FMF-related amyloidosis or other non-diabetic primary glomerulonephropathy (PGN) was performed. Patients were followed for CVD events. Flow-mediated dilatation (FMD), FGF-23 levels, serum lipid levels, hsCRP, BMI and homeostasis model assessment (HOMA) were assessed. A Cox regression analysis was performed to evaluate the probability of CVD events associated with each risk factor.

**Results:** There were 107 patients in FMF-related amyloidosis group and 126 patients with PGN group. Forty-seven CVDs were registered during the 4.2-years follow up; 28 patients in the FMF-related amyloidosis versus 14 patients with PGN group. Mortality due to CVD was higher in patients less than 40 years old with amyloidosis than PGN (12/107 and 3/126 respectively, RR=4.71, 95% CI 1.36-16.25, p=0.006). Patients with CVD had higher levels of proteinuria, hsCRP and FGF23, and lower FMD compared to patients without CVDs. Across both groups, FGF23 and FMD levels were independently associated with the risk of CVDs (Table 1).

**Conclusion:** Patients with FMF-related amyloidosis are at increased risk of CVDs with early mortality age. These patients should be closely monitored and if inflammation is poorly controlled with colchicine, biological agents must be added to treatment even if they develop amyloidosis. We also found that hsCRP, FGF-23 and FMD levels were the strongest predictors of CVD risk in patients with FMF. These biomarkers can stratify risk of early CVD in patients with FMF-related amyloidosis.

**References:**

**Disclosure of Interests:** None declared

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**Table 1. Multivariate analysis of factors associated with the risk of suffering a cardiovascular event**

<table>
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<tr>
<th>Variables</th>
<th>FMD</th>
<th>FGF23</th>
<th>glomerulopathy</th>
<th>Amyloidosis</th>
<th>hsCRP</th>
<th>B</th>
<th>HR</th>
<th>95.0% CI for Exp(B)</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>All Groups</td>
<td>0.033</td>
<td>0.946</td>
<td>0.368</td>
<td>1.017</td>
<td>0.109</td>
<td>1.051</td>
<td>.001</td>
<td>1.001</td>
<td>&lt;.001</td>
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<tr>
<td>Primary</td>
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<td>0.051</td>
<td>0.575</td>
<td>0.762</td>
<td>0.062</td>
<td>0.691</td>
<td>&lt;.001</td>
<td>0.098</td>
<td>.021</td>
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<tr>
<td>FMD</td>
<td>-0.651</td>
<td>-0.501</td>
<td>-0.009</td>
<td>0.908</td>
<td>0.109</td>
<td>1.084</td>
<td>.002</td>
<td>0.009</td>
<td>1.009</td>
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<tr>
<td>hCRP</td>
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<td>-0.382</td>
<td>0.915</td>
<td>1.009</td>
<td>0.108</td>
<td>1.021</td>
<td>&lt;.001</td>
<td>1.009</td>
<td>1.009</td>
</tr>
</tbody>
</table>

FMD, Flow-mediated dilatation; hCRP, high sensitivity C reactive protein; CI, Confidence interval

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**Figure 1.** Comparison of cardiovascular disease survival between patients with FMF-related amyloidosis or primary glomerulopathy.

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