ABSTRACT 58  RD-BSPAR105
INVESTIGATING BIOMARKERS OF DISEASE ACTIVITY IN JUVENILE-ONSET LUPUS NEPHRITIS
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Introduction: Up to 80% of children with JSLE have been shown to develop LN, with 4–44% progressing to end stage renal disease. Improved methods of detecting LN onset, severity, flares and treatment response are required to prevent irreversible renal damage and to individualize patient management. Novel urinary and serum biomarkers for LN including MCP-1, AGP and S1P have been a focus of investigation within the UK JSLE Cohort study, but further investigation is anticipated to improve renal and overall JSLE patient survival.

Aims: To evaluate further urine biomarkers for LN in isolation and combine the underlying pathophysiological process involved in biomarker production, improving understanding of the LN disease process.

Method: Urine samples will be collected longitudinally from children participating in the UK JSLE cohort study alongside detailed demographic data, standardized clinical laboratory results and disease activity data (pBILAG2004). Controls samples will be obtained from children attending for elective surgery. The pBILAG2004 renal domain score will be used to identify patients with active LN/resolved LN patients who have never had LN. Renal pBILAG2004 scores will be correlated with urinary biomarker concentrations. Biomarkers warranting longitudinal investigation include TGF-β1, AGP, RAG, NAG and TWEAK. A human podocyte cell line, will also be used to investigate the origin of urinary biomarkers and their underlying signalling pathways.

Conclusion: Commercialization of LN urinary biomarker tests and a move towards biomarker driven individualized patient management is anticipated to improve renal and overall JSLE patient survival.

Disclosure statement: The authors have declared no conflicts of interest.

ABSTRACT 59  RD-BSPAR107
YOUNG PEOPLE’S DECISIONS ABOUT BIOLOGIC THERAPIES: WHO INFLUENCES THEM AND HOW?
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Introduction: Young people with a spectrum of inflammatory arthritis can have severe disease warranting biologic therapies. If so, they face a complex assessment of risks and benefits. Research shows interactions with others to influence individual’s treatment decisions; however, the literature has focused on adult relationships.

Aims: Our study explores the influence of individuals outside the care team (trusted others) on young people’s treatment decision-making.

Method: Young people (16–25 years) with inflammatory arthritis and experience of treatment decision-making have been recruited from three NHS Hospital Trusts. Young people have nominated trusted others involved in their decision-making. Sampling has been purposive and theoretical. Qualitative data, collected through semi-structured interviews, has been analysed using coding, memoing and mapping techniques.

Results: Twenty-two young people and nine trusted others have been interviewed. Young people emphasize their cognitive autonomy, typically describing people (other than health professionals) as limited in influence. The range of people portrayed as trusted is small and largely consistent. Mothers play a prominent role in the accounts of most young people, providing cognitive, practical and emotional support. Members of the wider cast of trusted others are, with a few exceptions, involved in more limited ways.

Conclusion: Mothers remain involved in treatment decision-making into young adulthood. Young people are circumspect about involving partners (and peers) and the applicability of adult models of decision-making is unclear. The evolving network of relationships in which young people are embedded must be taken into account if the support provided to them by professionals is to be tailored to their needs.

Disclosure statement: The authors have declared no conflicts of interest.

ABSTRACT 60  RD-BSPAR109
INVESTIGATING PHAGOCYTOSIS RECEPTORS IN SERUM FROM JUVENILE-ONSET SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS
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Introduction: Phagocytic clearance of apoptotic cells is defective in systemic lupus erythmatous (SLE). Mer, Tyr3 and Axl are important phagocytic receptors, the soluble forms of which inhibit apoptotic cell clearance and correlate with aspects of SLE disease activity. Juvenile-onset SLE (JSLE) is a more severe form of SLE and little is known about phagocytic clearance in JSLE patients. We have previously shown raised soluble Mer in JSLE patients compared with controls.

Aims: To determine soluble Mer (sMer), soluble Tyr3 (sTyr3) and soluble Axl (sAxl) plasma/serum concentrations in JSLE patients and whether they correlate with clinical biomarkers of disease activity.

Method: Plasma sAxl was measured by ELISA in paediatric controls (n = 14), JIA (n = 12) and JSLE patients (n = 14). Longitudinal serum sAxl, sTyr3 and sMer concentrations (mean±SEM) were measured by ELISA in JSLE patients (n = 14, 3 sample per patient)

Results: JSLE patients have increased sAxl plasma concentrations (35.493±2.706 pg/ml) compared with JIA (22.671±963.2 pg/ml, P = 0.0004) and controls (24.769±1654 pg/ml, P = 0.0003). Table 1 shows significantly higher sMer and sAxl serum concentrations in patients with haematological activity or on prednisolone compared with not. JSLE serum sAxl (r = -0.549, P = 0.0004) and sMer (r = -0.3186, P = 0.0481) correlated significantly with C3 levels. JSLE sAxl also correlated significantly with C4 levels (r = -0.4419, P = 0.0035) and dsDNA (r = 0.3793, P = 0.0296). Serum sTyr3 correlated with JSLE patient age (r = -0.3739, P = 0.0269) and SLEDAI (r = -0.3184, P = 0.0452).

Conclusion: The significantly increased JSLE plasma/serum phagocytic markers and their association with disease activity biomarkers indicate an important potential link between a dysregulated phagocytic environment and JSLE pathogenesis.

Disclosure statement: The authors have declared no conflicts of interest.

Table 1. sMer and sAxl serum concentrations with haematological activity and prednisolone treatment

<table>
<thead>
<tr>
<th>Haematological</th>
<th>Haematological</th>
<th>Prednisolone</th>
<th>No</th>
<th>Prednisolone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BILAG A/B</td>
<td>BILAG C/D/E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sMer serum concentration, ng/ml</td>
<td>16.85±1.697</td>
<td>11.91±0.8152</td>
<td>0.0032</td>
<td>14.36±0.9360</td>
</tr>
<tr>
<td>sAxl serum concentration, pg/ml</td>
<td>41.273±2.930</td>
<td>32.204±1.1647</td>
<td>0.0015</td>
<td>37.369±2.9015</td>
</tr>
</tbody>
</table>