respondents for anticipatory N&V in the first two choices. 22% of respondents had no access to clinical psychology services. Half of all respondents thought N&V developed in > 25% of patients on MTX and 2/3 of respondents thought 10% or more of patients were switched to biologics because of MTX intolerance rather than inefficacy.

**Conclusion:** MTX-related N&V is recognized as a common problem amongst prescribers of MTX for JIA. Prophylactic strategies such as anti-emetics are variably used, and there are several different strategies followed to manage the problem. This survey’s results will support the development of prospective studies comparing different strategies of preventing and dealing with MTX-related N&V.

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

**ABSTRACT 54 BSPAR165**

**THE RELATIONSHIP BETWEEN BENIGN JOINT HYPERMOBILITY SYNDROME AND DEVELOPMENTAL COORDINATION DISORDERS IN CHILDREN**

V. Easton1, H. Bacon1, K. Armon1 and A. J. Macgregor1
1Norfolk and Norwich University Hospital NHS Foundation Trust
Correspondence to: V. Easton. E-mail: vicky.easton@nnnuh.nhs.uk

**Introduction:** Benign joint hypermobility syndrome (BJHS) is a common heritable connective tissue disorder characterized by excessive joint flexibility and musculoskeletal pain. In childhood, BJHS has been linked clinically with disorders of motor control, however the association remains poorly characterized and the extent to which this reflects developmental variation remains uncertain.

**Aims:** This study examines data from an interventional study of BJHS in childhood to assess the relationship between joint hypermobility and motor control.

**Method:** The study subjects included 117 children between the ages of 5 and 16 years. All had documented joint hypermobility (assessed by a paediatric rheumatologist) and musculoskeletal pain. Motor ability was assessed using the norm-referenced Movement Assessment Battery for Children (M-ABC). The M-ABC includes tests for manual dexterity, ball skills and balance. Children with age-corrected scores falling below the 15th percentile were defined as having movement difficulty.

**Results:** Among the children with BJHS that were assessed, 32% scored 15 percentile on the M-ABC (P < 0.001). The prevalence of movement difficulty was higher in younger when compared with older children with BJHS (5 to 8 years: 41%; 9 to 12 years: 29%; 13 to 16: 19%). Movement difficulty was more common in males (40%) than females (25%). There was no association with the extent of hypermobility as assessed on the Beighton score or with the level of pain as assessed by VAS.

**Conclusion:** Movement difficulty is a common independent component of BJHS in childhood. An assessment of motor function needs to be included as part of the assessment of all children with BJHS and may merit targeted intervention.

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

**ABSTRACT 55 BSPAR166**

**EVALUATION OF MAGNETIC RESONANCE IMAGING ABNORMALITIES IN JUVENILE NEURO-Psychiatric Systemic lupus erythematous**

M. Al-Obaidi1,2, S. Brown2, L. Ramsden1, N. Martin2, D. Saunders2, C. A. Pilkington3, P. A. Brogan3 and D. Eleftheriou2
1Paediatric Rheumatology, Sheffield Children’s Hospital, 2Neuropathology and 2Paediatric Rheumatology, Great Ormond Street Hospital, London, UK
Correspondence to: M. Al-Obaidi. E-mail: muthana.al-obaidi@sheffield.ac.uk

**Introduction:** Neuropsychiatric SLE (NPSSLE) is a diagnostically challenging, severe, and life-threatening condition. Neuroimaging techniques such as MRI are increasingly used to assist the diagnosis and monitoring of the disease course in adults with NPSSLE. The role of MRI in the evaluation of children and adolescents with suspected juvenile NPSSLE is however unknown.

**Aims:** The aim of this study was to describe the abnormalities identified with conventional MRI in children with NPSSLE; and any potential associations with clinical and/or serological markers presenting to a tertiary paediatric rheumatology service.

**Method:** Single centre (Great Ormond Street Hospital NHS Foundation Trust, London) retrospective case series of patients with juvenile NPSSLE seen between April 2003 and October 2010. Contrast enhanced brain MR images of the first episode of active NPSSLE were reviewed. All patients fulfilled the ACR 1982 revised criteria for the classification of SLE and were classified according to the 1999 ACR case definition for NPSSLE syndromes. We excluded patients with a history of alternative neurological conditions. Presenting neuropsychiatric manifestations, immunological findings and treatment are reported. Continuous variables are summarized as median and ranges. Categorical variables are presented as percentages. Fisher’s exact test was used to identify the probability of abnormal MRI findings.

**Results:** A total of 27 patients median age 11 (4–15) years, 22 females with suspected juvenile NPSSLE were studied. Presenting clinical symptoms included: headaches (85.1%); mood disorder/depression (82.9%); seizures (22.2%); acute psychosis (18.5%); cognitive dysfunc- tion (14.8%); movement disorder (14.8%); acute confusional state (14.8%); aseptic meningitis (7.4 %); demyelinating syndrome (3.7%); myelopathy (3.7%); dystonia (3.7%); cranial neuropathy (3.7%). The principal MR findings were: absence of MRI abnormalities despite signs and symptoms of active NPSSLE (59% of all patients); focal hyperintensities on T2-weighted imaging in both white and grey matter (33%); diffuse cortical grey matter lesions (3.7%); and diffuse brain atrophy (18.5%). The presence of ≥2 neuropsychiatric manifestations strongly associated with abnormal MRI findings (P = 0.014).

Positive dsDNA antibodies were noted in 74% of patients; positive extra-nuclear antibodies in 74%, lupus anticoagulant in 15% and aCL antibodies in 37%. All children were treated with HCQ and high doses of i.v. corticosteroids while other treatments used were: i.v. cyclophosphamide (51.8%), rituximab (40.7%) and plasma exchange (11.1%).

**Conclusion:** In the present study, no conventional MRI abnormalities were observed in the majority of patients with clinically active NPSSLE. The presence of ≥2 neuropsychiatric manifestations was strongly associated with abnormal MRI. Improved MR techniques and the advent of other alternative diagnostic imaging modalities may improve the detection rate of brain involvement in juvenile NPSSLE.

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

**ABSTRACT 56 BSPAR167**

**IS THE COMPARATIVE RESTRICTION OF BIOLOGIC USE IN CHILDREN AND ADOLESCENTS JUSTIFIED AT THE SERVICE LEVEL: A COMPARISON WITH ADULT USE.**

N. Wilkinson1, R. Waller1, A. Ahmed1 and E. Godbold1
1Oxford Paediatric and Adolescent Rheumatology Centre, Oxford, UK
Correspondence to: N. Wilkinson. E-mail: nick.wilkinson@ouh.nhs.uk

**Introduction:** Whereas routine treatment of inflammatory arthritis in adults includes eight biologic agents with grounds for sequential use, children and young persons (CYP) are confined to two agents and no routine sequential use.

**Aims:** To compare service-level efficacy, tolerability and costs of NICE and non-NICE-approved biologics in CYP and compare this with biologic use in adults.

**Method:** Retrospective analysis of 6-year data from databases of a regional paediatric rheumatology service and the local adult service. 

**Results:** 197 biologic prescriptions were made for CYP (mean age 12.3 years; range 1.4–20.6 years); mean duration 23 months (3–110 months); total 366 patient years). Of these 173 were to 121 patients with JIA or associated uveitis. 64 prescriptions were NICE-approved; the rest (adalimumab 62, Infliximab 21, golimumab 4, anakinra 10, tocilizumab 3, abatacept 5, rituximab 2) required individual funding. There were no differences between non-NICE and NICE-agents in age or gender, age of onset, or rates of withdrawal for failure of treatment (P = 0.89).

**Conclusion:** There was no difference in back up strategies of preventing and dealing with MTX-related N&V. Support the development of prospective studies comparing different strategies followed to manage the problem. This survey’s results will support the development of prospective studies comparing different strategies of preventing and dealing with MTX-related N&V. 

**Disclosure statement:** The authors have declared no conflicts of interest.
infliximab. There were significant savings with anakinra in 6 of 9 SoJIA-patients.

**Conclusion:** This large comparison of paediatric and adult services has found no differences in tolerability, efficacy and, in general, cost to support ongoing restriction of biologic use in CYP. New treatment pathways and monitoring will enhance cost/benefit.

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

**TABLE 1** A comparison of biologic use in CYP and adults

<table>
<thead>
<tr>
<th>Biologics</th>
<th>Patients</th>
<th>Inefficacy</th>
<th>Intolerance</th>
<th>2nd agent</th>
<th>3- agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paed</td>
<td>173</td>
<td>121</td>
<td>36</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Adult</td>
<td>891</td>
<td>661</td>
<td>202</td>
<td>53</td>
<td>124</td>
</tr>
<tr>
<td><em>F</em> test</td>
<td></td>
<td></td>
<td><em>P</em> = 0.26</td>
<td><em>P</em> = 0.22</td>
<td><em>P</em> = 0.20</td>
</tr>
</tbody>
</table>

**ABSTRACT 57 BSPAR168**
THE PREVALENCE AND INTERPRETATION OF ANTIPHOSPHOLIPID ANTIBODIES IN JUVENILE SYSTEMIC LUPUS ERYTHEMATOSUS

M. S. Saleem, D. L. Simpson, C. J. Roberts, A. V. Ramanan and M. W. Beresford on behalf of the UK JSLE Study Group
Department of Paediatric Rheumatology, Bristol Children’s Hospital and Department of Paediatric Rheumatology Alder Hey Children’s Hospital, Liverpool, UK

**Correspondence to:** M. S. Saleem.
E-mail: maryam.saleem11@imperial.ac.uk

**Introduction:** This study utilizes a national, multi centre database collected by the UK juvenile-onset SLE cohort study.

**Aims:** To determine the prevalence of APL and APS in patients with JSLE; to explore the relationship between APL and clinical phenotype including thrombotic manifestations, abnormal neurology and haematology.

**Method:** Detailed data on clinical phenotype and serology including APL levels, aCL and LA were collected at baseline and annual follow-up assessments in 240 patients who fulfilled 4 or more ACR SLE criteria from 14 centres across the UK. Correlations between APL and its associated manifestations were explored.

**Results:** In those tested for each respective antibody at diagnosis prevalence was 52% (59/113) IgG aCL, 26% (22/85) IgM aCL and 39% (16/41) LA. At follow-up of average 1 year, prevalence fell to 28% (20/72) IgG aCL, 25% (15/60) IgM aCL and 35% (7/20) LA. The prevalence of APS in this cohort is 0.8% (2/240). Disease activity, measured using the BILAG index was significantly higher in IgG aCL positive patients than negative patients (average score 9 vs 5). A number of clinical features were significantly more prevalent in patients with IgG aCL and LA positivity but not IgM aCL. These included neurological disorders, livido reticularis and thrombosis.

**Conclusion:** This is the first study of the prevalence of APL antibodies and APS in such a large JSLE cohort. Drug therapy may help decrease APL levels. IgG aCL and LA are associated with higher disease severity, with LA affecting a greater number of clinical manifestations.

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