interested to better understand the effect of IBD on pregnancy outcomes.

**Methods:** Between 2011 and 2015, a total of 39 pregnant patients with IBD were reviewed. Sixteen had Crohn’s disease (CD) and 23 had ulcerative colitis (UC). We retrospectively evaluated the 41 pregnancy outcomes in these 39 patients. In the CD cases, active disease was defined as CD activity index (CDAI) ≥150, while in the UC cases, active disease was defined as clinical activity index (CAI) ≥4.

The pregnancy and neonatal complications including spontaneous abortion, preterm delivery (<37 weeks), caesarean section, low birth weight (<2500g) and congenital abnormality were determined.

**Results:** The mean age was 33.5±4.2 years in CD patients and 32.7±5.2 years in UC patients. For most patients, IBD was inactive prior to pregnancy (84%, n=33). Elemental diet (n=9 cases) and anti-tumour necrosis factor-α biologics (n=10) were the most common drugs used during pregnancy in CD patients, while mesalazine (n=22) was the most common drug in UC patients. flare up rate during pregnancy was higher in UC patients than in CD (62.5% vs 29.4%). Most patients relapsed in the first pregnancy trimester (28.5%) and puerperal period (60%). The rate of preterm delivery (12.2%), low birth weight (22.0%) and caesarean section (31.7%) were not significantly different from non-IBD controls (n=394; 28.4%, 32.3%, 46.4% respectively). However, the rate of congenital abnormality was higher in IBD patients than in non-IBD (7.3% vs 0.2%). The rate of neonatal and pregnancy complications was significantly higher during active disease than during quiescent period (p<0.05).

**Conclusions:** We found that IBD flare ups had occurred particularly in the first pregnancy trimester and puerperal period. flare up rate was higher in UC patients than in CD patients. Accordingly, IBD patients, particularly UC patients should be diligently monitored in the first pregnancy trimester and puerperal period. Likewise, in this study the prevalence of congenital abnormality was higher in IBD patients than in non-IBD, but we did not investigate the risk factors for congenital abnormality in the IBD clinical setting.

**P151 Spinal disorders in IBD patients 20 years after diagnosis. Results from the IBSEN study**

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**Background:** Patients with inflammatory bowel disease (IBD) often suffer from extraintestinal rheumatic manifestations, prevalently including inflammatory back disorders like ankylosing spondylitis (AS), axial spondylarthropathy (axial SpA) and inflammatory back pain (IBP). However, few studies have estimated the prevalence of these disorders late in the disease course. The aim of this study was to describe the prevalence of inflammatory back disorders 20 years after IBD diagnosis in a well-defined IBD cohort.

**Methods:** All newly diagnosed cases of IBD in four counties in southeastern Norway between 1990 and 1993 were included in the IBSEN cohort and followed prospectively. At the 20 year follow-up the patients answered a detailed questionnaire regarding their IBD disease course. Moreover, they were asked about symptoms of inflammatory back disorders and established diagnoses of rheumatic diseases. The patients were classified as having IBP or axial SpA according to the criteria from the Assessment of SpondyloArthritis International Society (ASAS) (IBP if 4 of 5; age at onset<40, insidious onset, pain at night, improvement with exercise, no improvement with rest. Axial SpA criteria; chronic back pain (>3 months) and age at onset<45 plus either radiological sacroiliitis and ≥1 SpA feature or HLA-B27 positivity and ≥2 SpA features).

**Results:** In total 599 patients from the original cohort were still alive, of those 470 (78.5%) were investigated. Chronic back pain had been present during the disease course in 148 patients (31.5%), 90 (38.3%) women and 58 (24.7%) men. The ASAS criteria for IBD were met by 37 patients (7.9%), 23 women and 14 men, and 17 patients (3.6%) fulfilled the criteria for axial SpA (11 women and 6 men). Over the last 3 months 80 patients (17.0%) reported chronic back pain, leaving only 21 patients (4.5%) fulfilling the IBD criteria and 5 patients (1.1%) the axial SpA criteria. AS was diagnosed in 21 patients (4.5%), 8 women and 13 men. The total HLA-B27 prevalence was 8.7%. The prevalence was higher among patients with chronic back pain, IBP, axial SpA and AS, with 12.8%, 27.0%, 88.7% and 57.1%, respectively.

**Conclusions:** The prevalence of axial SpA and AS in IBD patients late in the disease course was higher than the prevalence reported in general populations (total SpA 0.4−1.9% and AS 0.1−1.8%) [1], while the prevalence of chronic nonspecific back pain amongst IBD patients was comparable to the general population (reported to be 20% in men and 25−33% in women) [2].

**References:**

**P152 Reconsidering the prognostic value of traditional serologic antibodies in Crohn’s disease – immunoglobulin classes to take the centre stage**


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**Background:** The most relevant scope of serologic antibodies in Crohn’s disease (CD) is to stratify the risk of complicated disease course. Significance of distinct antibody classes and their characterisation was rarely considered. We aimed to address these concerns.

**Methods:** Sera of 266 well-characterized CD patients (m/f: 112/154, median age: 25 years, B1: 80.1%, P1: 18.0%) and 155 controls were assayed for traditional anti-microbial antibodies (ASCA IgA/IgG, anti-OMP IgA). Endotoxin core IgA (EndoCAb) and a panel of non-specific immunoglobulin A (IgA) molecules (IgA1, IgA2 and secretory [s] IgA) were also assessed by ELISA. An observational follow-up study [median, 143 months] was conducted to assess possible associations between serologic antibodies and the development of various complications and subsequent surgical interventions. A novel flow cytometry based test system was established for characterisation of IgA type ASCA to reveal possible origin of the antibody.

**Results:** A total of 65.7% and 46.2% of the CD patients were posi-
Table 1. Summary of multivariate Cox regression analysis for the association of serologic antibodies with complicated disease course

<table>
<thead>
<tr>
<th>HR [95% CI]; p</th>
<th>IP/S in B1 pts</th>
<th>SR in B1 pts</th>
<th>PP in P0 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCA IgA</td>
<td>2.92 [1.85–4.62]; &lt;0.001</td>
<td>1.77 [1.09–2.87]; 0.021</td>
<td></td>
</tr>
<tr>
<td>ASCA IgG</td>
<td>2.77 [0.36–5.63]; 0.005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASCA IgA/IgG</td>
<td>1.76 [1.09–2.87]; 0.022</td>
<td>1.45 [0.86–2.45]; 0.163</td>
<td>2.07 [0.98–4.39]; 0.057</td>
</tr>
<tr>
<td>OMP IgA</td>
<td>1.66 [1.09–2.54]; 0.019</td>
<td>2.08 [1.28–3.38]; 0.003</td>
<td>1.13 [0.63–2.01]; 0.692</td>
</tr>
<tr>
<td>sIgA</td>
<td>1.54 [0.97–2.44]; 0.066</td>
<td>1.37 [0.82–2.28]; 0.23</td>
<td>1.25 [0.67–2.34]; 0.475</td>
</tr>
<tr>
<td>EndoCab IgA</td>
<td>2.60 [1.62–4.17]; &lt;0.001</td>
<td>1.66 [0.96–2.87]; 0.74</td>
<td>0.74 [0.33–1.68]; 0.475</td>
</tr>
</tbody>
</table>

Predictive for ASCA IgA/IgG and anti-OMP antibodies. Both ASCA types occurred equally. EndoCab IgA positivity was more frequent (15.4% vs. 5.4%, p < 0.01) and sIgA levels were increased [median, 51 vs. 29 μg/ml, p < 0.001] in CD compared to controls. They were also associated with presence of IgA type anti-microbial antibodies. Contrary, ratio of IgA2/IgA1 in CD corresponded with the value of the controls. In Kaplan-Meier analysis, development of internal penetrating and/or stenosing (IPS) complications and resective surgery (SR) was significantly associated with IgA type, while development of perianal penetration (PP) with IgG type ASCA. Performance of OMP and EndoCab IgA was equal to ASCA IgA, however sIgA not. Anti-microbial antibodies remained independent predictors in multivariate Cox-regression analysis comprising relevant clinical factors. Without uncoupling of Ig antibody classes yielded clearly inferior performance.

ASCA IgA subtyping assays revealed marked increase in the proportion of IgA2 subtype (29%) and presence of the secretary component (89% of total ASCA IgA) concurrently.

Conclusions: Consideration of antibody classes is an important novel parameter in serology-based prediction in CD. Involvement of gut mucosal immune system is in center of IgA type antibody formation reflecting sustained exposure and dysregulated immureponse to bacterial constituents.

P153
Role of 3D endoanal ultrasound in perianal fistulising Crohn’s disease. Preliminary results

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Background: Perianal fistulising Crohn’s Disease is a challenging clinical situation; the development of appropriate diagnostic tools is crucial for correct patient’s management. The role of 3D endoanal ultrasound is well established in the diagnosis of anal fistulas. In this report we investigate if these some specific endosonographic features (the Crohn’s Ultrasound Fistula Sign-CUFS, a double track, the presence of debris in the fistula track or abscess, the maximum width of the fistula tract) may have a role in discriminating between cryptoglandular and Crohn’s Disease related fistulas.

Methods: 48 consecutive patients with anal fistulas were included in the study from July 2015 to January 2016. Each patient underwent a 3D endoanal ultrasound (B-K Medical, 2052 transducer) and subsequent surgery. 11 patients had an established diagnosis of CD. The abovementioned ultrasonographic features were searched for and compared between the cryptoglandular fistulas group (“crypt group”) and the CD related fistulas group (“CD group”). Cohen K Statistics was used to determine the agreement between ultrasound diagnosis (primary orifice, tract) and operative findings. Wilcoxon rank sum test has been used to compare the fistula width between cryptogenic and CD cases. Diagnostic accuracy of the Width of the fistula tract has also been evaluated with a ROC curve and the AUC. The role of all the abovementioned signs and ultrasonography features as diagnostic tools for perianal fistulising CD has also been investigated and Sensitivity, Specificity, Accuracy, Positive and Negative Predictive Value (PPV/NPV) and Positive and Negative Likelihood ratios (PLR/NLR) have been calculated. Statistical analysis were performed using STATA 12 statistical software.

Results: Preoperative ultrasound and surgical findings showed a very good agreement (k=0.96 for primary orifice and k=0.94 for fistula tract). Mean width of the fistula tract was 2.7 mm in the crypt group and 5.1 mm in the CD group (p<0.001, Wilcoxon rank sum Test). A width over 4 mm has been proposed as a cut-off for highly suspicious CD related fistulas. The frequency observed of the CUFS, double track, debris and width >4 mm are significantly higher in the CD group than in the crypt group (p<0.01, Fisher exact test). All of these signs show a high sensitivity, specificity, positive and negative predictive value and a high positive likelihood ratio for diagnosis of perianal Crohn’s disease.