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Inflammatory bowel disease symptom severity is influenced by hormone fluctuations in many women with IBD

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Background: Studies have shown there is a relationship between IBD and symptom severity among women at varying times of their menstrual cycle suggesting a hormonal influence on disease activity in females. We aim to identify and characterize a population of female patients with IBD that are affected by varying hormone influences during menses, menopause, and on HRT.

Methods: Using the CCFa Partners internet-based platform, women with IBD were invited to participate in an online cohort study from June 2012 through September 30, 2012. Participants were asked to rate whether changes in disease activity occurred in the context of: menarche, menses, ovulation (2 weeks before menses), menopause, and hormonal replacement therapy (HRT), with symptoms quantified using a 5-point scale (i.e. much worse ? somewhat worse ? no change ? somewhat better ? much better). Disease-specific quality of life was measured using the short inflammatory bowel disease questionnaire (SIBDQ). Clinical and demographic predictors of hormonal sensitivity status were assessed using univariate and multivariable regression methods.

Results: A total of 1203 female patients were identified (64% CD, 34% UC, 2% indeterminate colitis). Median age was 43 yrs (interquartile (IQR) range 31-55). Mean duration of disease was 11 yrs (IQR 5 to 21). Mean age (SD) at menarche (n=1184) was 12.9 (3.3) yrs. Mean age at menopause (n=458) was 46.4 (8.1) yrs,. Over half of women (CD 53%, UC 51%) endorsed worsening symptoms during menses, but only 1% reported symptom improvement. During ovulation, most women (78%) reported no change in their IBD symptoms. Women who reported worse symptoms during menses (n=619) were younger (26 yrs vs 34 yr, $p<0.01$), and endorsed lower quality of life (SIBDQ 4.8 vs 5.2, $p<0.01$). Two-thirds of women reported taking hormonal contraception (OCP); 9.8% reported improved IBD symptoms on OCP while 7.5% had symptom worsening on OCP. Among menopausal women, having worse symptoms after menopause was associated with an older age of IBD onset (44y vs 32y, $p<0.01$). Among menopausal women, 20% of women reported taking HRT and 8% nonhormonal supplements for menopausal symptoms. Women reporting better symptoms during menopause had better quality of life than patients who had worse symptoms during menopause (SIBDQ 5.2vs 4.4, $p<0.01$). Disease worsening during menses, ovulation, or menopause was not associated with age of menarche or BMI.

Conclusion: Symptom severity is influenced during times of hormone changes in many women with IBD. Younger age of IBD onset may portend worsening symptoms during menstrual cycles. Further exploration of hormonal influences in IBD is warranted.