

# AB058. SOH23ABS\_197. Obesity, sarcopenia and myosteatosi s: impact on clinical outcomes in the operative management of Crohn's disease

Mark Donnelly<sup>1</sup>, Éanna Ryan<sup>2</sup>, John Finnegan<sup>3</sup>,  
Dorothee Driever<sup>1</sup>, Jessie Elliott<sup>1</sup>, Kevin Conlon<sup>1</sup>,  
Paul Neary<sup>1</sup>, Dara Kavanagh<sup>1</sup>, James O'Riordan<sup>1</sup>,  
Deirdre McNamara<sup>4</sup>

<sup>1</sup>Department of Surgery, Tallaght University Hospital, Dublin, Ireland;

<sup>2</sup>Department of Surgery, St. Vincent's University Hospital, Dublin, Ireland; <sup>3</sup>Department of Radiology, Tallaght University Hospital, Dublin, Ireland; <sup>4</sup>Department of Gastroenterology, Tallaght University Hospital, Dublin, Ireland

**Background:** Obesity, sarcopenia and myosteatosi s in inflammatory bowel disease may confer negative post-operative outcomes, yet their prevalence and impact among patients with Crohn's disease (CD) have not been systematically studied. The aim of this study was to assess patients with CD and determine impact on operative outcomes.

**Methods:** A total of 124 patients with CD undergoing surgical treatment from 2000–2018 were studied. Total (TFA), subcutaneous (SFA) and visceral fat areas (VFA), lean tissue area (LTA) and intramuscular adipose tissue (IMAT) were determined preoperatively by CT-scan. Univariable and multivariable linear, logistic and Cox proportional hazards regression were performed.

**Results:** Consecutive patients were studied (ileocolonic disease 53%, n=62; biologic therapy 34.4%, n=43). Mean fat mass was 22.7 kg, with visceral obesity evident in 23.9% (n=27). Increased fat stores were associated with reduced risk of emergency presentation, but increased corticosteroid use  $\beta$  (SE) 9.09 (3.49),  $P=0.011$ . Mean lean body mass (LBM) was 9.9 kg. Sarcopenia and myosteatosi s were associated with impaired nutritional markers. Myosteatosi s markers IMAT ( $P=0.002$ ) and muscle attenuation ( $P=0.0003$ ) were associated with increased grade of complication. On multivariable analysis, IMAT was associated with increased postoperative morbidity (OR 1.08, 95% CI: 1.01–1.16,  $P=0.037$ ) and increased comprehensive complications index

(CCI,  $P=0.029$ ). Measures of adiposity were not associated with overall morbidity, however increased VFA predicted increased risk venous thromboembolism [odds ratio (OR) 1.02, 95% CI: 1.00–1.05,  $P=0.028$ ], and TFA was associated with increased wound infection (OR 1.00, 95% CI: 1.00–1.01,  $P=0.042$ ).

**Conclusions:** Increased adiposity may reflect preservation of nutritional status and relatively more quiescent disease, and despite specific increased perioperative risks, overall morbidity is not impacted. Myosteatosi s is associated with nutritional impairment, and independently predicts increased overall postoperative morbidity. Impaired muscle mass and function may represent a target for optimisation to improve outcomes in surgical management of CD.

**Keywords:** Crohn's disease (CD); inflammatory bowel disease; body composition; sarcopenia; myosteatosi s

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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