Oral presentations

BSG plenary

OC-001 THE IMPACT OF THE INTRODUCTION OF FORMALISED POLYPECTOMY ASSESSMENT ON TRAINING IN THE UNITED KINGDOM

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[1,*]K Patel, [1]O Faiz, [2]M D Rutter, [3]P Dunckley, [1]S Thomas-Gibson. *[1]Wolfson Unit for Endoscopy, St Mark's Hospital, London; [2]Department of Gastroenterology, University Hospital of North Tees, Stockton-on-Tees; [3]Department of Gastroenterology, Gloucestershire Royal Hospital, Gloucester, UK*

Introduction Polypectomy is regarded as the most hazardous part of colonoscopy, accounting for the majority of procedure-associated morbidity and yet is a necessary skill for all colonoscopists. Training in polypectomy has, to date, been variable and poorly structured. Anecdotal evidence suggested poor exposure to polypectomy during training. A novel assessment tool, the Directly Observed Polypectomy Skills (DoPYS), was introduced nationally in the United Kingdom in October 2011 with the intention of both improving training and facilitating documentation of competency.

Methods The aim was to assess the impact of the mandatory introduction of the DOPyS as part of the formal colonoscopy certification process. Applications for certification in the year prior to the introduction of DOPyS were analysed retrospectively and compared with data collected prospectively for those in the following year.

Data were collected on the total lifetime number of colonoscopies performed, the number of assessments for both colonoscopy and polypectomy and whether applicants had any evidence of performing polypectomy before certification of competence in colonoscopy.

Results There were 175 applicants for certification in the first year. The median number of procedures per candidate was 287. Thirty two per cent of candidates had evidence of any observed polypectomy with 7 per cent of candidates referring to training in endoscopic mucosal resection (EMR). The median number of formative colonoscopy assessments was 3 (range 0–16).

In the year since DOPyS was introduced there were 150 applications for certification. The median number of procedures per candidate was 206. All of these candidates had evidence of polypectomy assessment with a median number of DOPyS of 7 (range 3–27). 89 per cent of applicants had evidence of assessed EMR. The median number of formative colonoscopy assessments in this cohort was 32 (range 9–199).

There was a significant increase in the number of logged polypectomy assessments ($p < 0.001$), experience of EMR ($p < 0.001$) and formative colonoscopy assessments ($p < 0.001$). There was no significant difference in the total number of colonoscopy procedures performed.

Conclusion These data – the largest in the literature to date – show that structured polypectomy assessment improves trainees' documented exposure to therapeutic endoscopy as well as providing formal evidence of skills acquisition. As polypectomy plays an increasing role globally in colorectal cancer prevention, the DOPyS provides an effective means of assessing and certifying polypectomy in order to minimise the well-recognised risks associated with this technique.

Disclosure of Interest None Declared.

OC-002 SELECTIVE ALPHA V INTEGRIN DELETION IDENTIFIES A CORE, TARGETABLE MOLECULAR PATHWAY THAT REGULATES FIBROSIS ACROSS SOLID ORGANS

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[1,*]N Henderson, [2]T Arnold, [2]Y Katamura, [2]M Giacomini, [2]J Rodriguez, [3]J McCarty, [4]P Ruminski, [4]D Griggs, [5]J Maher, [1]J Iredale, [6]A Lacy-Hulbert, [7]R Adams, [2]D Sheppard. *[1]MRC Centre for Inflammation Research, University of Edinburgh, Edinburgh, UK; [2]Lung Biology Center, UCSF, San Francisco; [3]Dept of Cancer Biology, University of Texas MD Anderson Cancer Centre, Houston; [4]St Louis University, St Louis; [5]The Liver Centre, UCSF, San Francisco; [6]Harvard Medical School, Boston, United States; [7]Dept of Tissue Morphogenesis, University of Munster, Munster, Germany*

Introduction Myofibroblasts are the major source of extracellular matrix components that accumulate during tissue fibrosis, and hepatic stellate cells (HSCs) are the major source of myofibroblasts in the liver. To date, robust systems to genetically manipulate these cells have not existed. The paucity of tools that allow reliable, specific inactivation of genes in myofibroblasts *in vivo* has greatly hindered progress in understanding the underlying biology of fibrotic diseases.

Methods Mouse models of organ fibrosis: Chronic carbon tetrachloride injection (liver fibrosis), intratracheal bleomycin instillation (lung fibrosis) and unilateral ureteric obstruction (kidney fibrosis). Fluorescent reporter mice: mTmG (Td tomato/EGFP) and Ai14 (Rosa-CAG-LSL-tdTomato-WPRE) mice were crossed with *PDGFRβ(platelet derived growth factor beta)*-Cre mice. Integrin knockout mice: $Itgav^{flox/flox}$, $itgb8^{flox/flox}$ and $Itgb6^{-/-}$ mice were maintained on C57BL/6 background and $itgb3^{-/-}$ and $Itgb5^{-/-}$ mice were maintained on a 129/svJae background. Fluorescent cell sorting: Td Tomato positive cells from Ai14; *PDGFR*β-Cre mice were sorted using a FACSAria.

Results We report that *PDGFR*β (platelet derived growth factor receptor beta) Cre inactivates genes in murine HSCs with high efficiency. We used this system to delete the integrin αv subunit because of the suggested role of multiple αv integrins as central mediators of fibrosis in multiple organs. Deletion of the αv integrin subunit in HSCs protected mice from CCl_4-induced hepatic fibrosis, whereas global loss of αvβ3, αvβ5 or αvβ6 or conditional loss of αvβ8 on HSCs did not. *PDGFR*β-Cre effectively targeted myofibroblasts in multiple organs, and deletion of αv integrins using this system was also protective in bleomycin-induced pulmonary fibrosis and renal fibrosis induced by unilateral ureteric obstruction. Critically, pharmacological blockade of αv integrins by a novel small molecule (CWHM 12) attenuated both liver and lung fibrosis, even when administered after fibrosis was established.

Conclusion These data identify a core cellular and molecular pathway that regulates fibrosis, and suggest that pharmacological targeting of all αv integrins may have clinical utility in the treatment of patients with a broad range of fibrotic diseases.

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Liver free papers

OC-003 MULTICENTRE RANDOMISED CONTROLLED STUDY COMPARING CARVEDILOL WITH ENDOSCOPIC BAND LIGATION IN THE PREVENTION OF VARICEAL REBLEEDING

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[1,*]L A Smith, [1]S Dickson, [2]P C Hayes, [2]D Tripathi, [2]J W Ferguson, [1]E H Forrest, [1]D R Gaya, [3]P R Mills, [4]H Suzuki, [5]D Young, [1]A J Stanley. *[1]Gastroenterology, Glasgow Royal Infirmary, Glasgow; [2]Liver Unit, Royal Infirmary of Edinburgh, Edinburgh; [3]Gastroenterology, Gartnavel General Hospital; [4]Gastroenterology, Southern General Hospital; [5]Biostatistics, University of Strathclyde, Glasgow, UK*

Introduction Rebleeding after an initial oesophageal variceal haemorrhage remains a significant problem despite therapy with