Weight Gain and Fatty Liver Disease

To investigate the effect of recent short-term weight gain on the incidence of nonalcoholic fatty liver disease (NAFLD) in non-obese participants (BMI less than 25 kg/m2), a retrospective cohort study to include nonobese individuals who participated in an annual health checkup between 2008 and 2018 in Tokyo, Japan was carried out.

A multivariable adjusted hazard ratio for the development of NAFLD diagnosis was estimated via ultrasound after a 3-kg unit gain of weight measured at a 2-year landmark time point post baseline. Multivariable adjustments included weight change from the age of 20 and other relevant confounding factors. Sensitivity analyses using additional landmark time points at 1, 3, 4, and 5 years postbaseline and time-dependent Cox proportional hazards regressions were performed.

A total of 27,064 nonobese participants included 142,699 person-years of followup; 2895 were diagnosed with NAFLD. Approximately 90% of the patients with NAFLD maintained their nonobese status before disease diagnosis. The adjusted hazard ratio for the development of NAFLD (for 3-kg unit of weight gain), at the 2-year landmark time post baseline was 1.6 in nonobese men and 1.66 in nonobese women. This association was maintained in the sensitivity analyses.

It was concluded that recent short-term weight gain is an independent risk factor for NAFLD development in nonobese men and women. Clinicians should be mindful of the association between weight gain and NAFLD onset, even in a nonobese population.

Yamada, G., Hagiwara, Y., Kimura, G., et al. "Impact of Body Weight Gain on the Incidence of Nonalcoholic Fatty Liver Disease in Nonobese Japanese Individuals." American Journal of Gastroenterology 2021; Vol. 116, pp. 735-740.

Risk of Infantile Infections in Pregnancy for Patients Treated With Biologics for IBD

Most biologics undergo placental transfer during pregnancy and persist at detectable concentration in exposed infants. Whether this is associated with an increased risk of infantile infection was evaluated with a systematic review and meta-analysis, evaluating the risk of infantile infections after in-utero exposure to biologics used to treat IBD.

PubMed, Embase, Scopus, Web of Science and CENTRAL from inception to June 2020 were searched to evaluate the association of biologic therapy during pregnancy in women with IBD and risk of infantile infections. Odds ratios of outcomes were pooled and analyzed using a random effects model.

Nine studies met the inclusion criteria, comprising 8013 women with IBD (5212 Crohn's disease, 2801 ulcerative colitis), who gave birth to 8490 infants. Biologic use during pregnancy was not associated with an increased risk of all infantile infection (OR 0.91). In a subgroup analysis for the type of infection, biologic use was associated with increased infantile upper respiratory infections (OR 1.57). Biologic use during pregnancy was not associated with infantile antibiotic use (OR 0.91), or infection-related hospitalizations (OR 1.33).

It was concluded that biologic use during pregnancy in women with IBD is not associated with the overall risk of infantile infection or serious infection requiring antibiotics or hospitalization, but is associated with increased risk of upper respiratory infections.

Gubatan, J., Nielsen, O., Levitte, S., et al. "Biologics During Pregnancy in Women with Inflammatory Bowel Disease and Risk of Infantile Infections: A Systematic Review and Meta-Analysis." American Journal of Gastroenterology, 2021; Vol. 116, pp. 243-253.

Refractory Reflux Symptoms: A Guide for Discontinuation of PPI Treatment

A proportion of patients with gastroesophageal reflux symptoms are refractory to PPI therapy. In order to develop a diagnostic approach to identify candidates appropriate for PPI cessation and to examine the clinical utility of prolonged wireless reflux monitoring to predict the ability to discontinue PPIs, a double-blinded, clinical trial performed over 3 years at 2 centers was carried out.

Adults were enrolled with troublesome esophageal symptoms of heartburn, regurgitation,

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and/or chest pain and inadequate PPI response. Participants underwent prolonged wireless reflux monitoring (off PPIs for greater than 7 days), and a 3-week PPI cessation intervention. Primary outcome was tolerance of PPI cessation (discontinued or resumed PPIs). Symptom burden was quantified using the reflux symptom questionnaire, electronic diary (RESQ-eD).

Of 128 enrolled, 100 participants met inclusion criteria (mean age 48.6 years; 41 men, 34 participants, 34% discontinued PPIs). The strongest predictor of PPI discontinuation was number of days with acid exposure time (AET) greater than 4%. Participants with 0 days of AET greater than 4% had a 10x increased odds of discontinuing PPI than participants with 4 days of AET greater than 4%. Reduction in symptom burden was greater among the discontinued vs. resumed PPI group.

It was concluded among patients with typical reflux symptoms, inadequate PPI response and absence of severe esophagitis, acid exposure on reflux monitoring predicted the ability to discontinue PPIs without symptom escalation. Up-front reflux monitoring of acid suppression can limit unnecessary PPI use and guide personalized management.

Yadlapati, R., Mishia, M., Gayawali, C., et al. "Ambulatory Reflux Monitoring Guides Proton Pump Inhibitor Discontinuation in Patients with Gastroesophageal Reflux Symptoms: A Clinical Trial." Gastroenterology 2021; Vol. 160, pp. 174-182, January 2021.

IBD and the Risk of COVID-19

To determine whether patients with IBD have an increased risk of developing SARS-CoV-2 compared with patients without IBD, a nationwide, retrospective cohort study was carried out in the U.S. Veterans Affairs Healthcare System from January 2020 to June 30, 2020. Each patient with IBD was matched with 2 patients without IBD on age, sex, race, location, and comorbidities. The outcome of interest was development of SARS-CoV-2.

A total of 38,378 patients with IBD and 67,433 patients without IBD, were evaluated; 87 (0.22%) and 132 (0.20%) patients developed incident CoVID-2 infection, respectively.

It was concluded that patients with IBD are not at significantly increased risk of developing SARS-CoV-2 infection when compared with patients without IBD.

Khan, N., Patel, V., Xie, D., et al. "Are Patients with Inflammatory Bowel Disease at an Increased Risk of Developing SARS/CoVID-2 than Patients Without Inflammatory Bowel Disease? Results From a Nationwide Veterans' Affairs Cohort Study." American Journal of Gastroenterology 2021; Vol. 116, pp. 808-810.

Safety and Efficacy of a New Sulfate-Based Tablet Preparation for Colonoscopy

This new-based bowel prep for colonoscopy contains poorly-absorbed sulfate salt, which acts to retain water within the intestinal lumen, resulting in a copious diarrhea in bowel cleansing. This study was carried out to evaluate the safety and efficacy of these oral sulfate tablets (OST), compared with a US FDA-approved bowel prep solution containing PEG3350, electrolytes, and ascorbate (PEG-EA).

A total of 515 patients with a mean age of 57 years were enrolled in a single-blind, multi-center, noninferiority study. Subjects were assigned either PEG-EA or OST administered in split-dose regimen starting the evening before colonoscopy. PEG-EA was taken according to its approved labeling (1 L of prep solution with 16 oz. of additional water) in the evening and again in the morning. OST patients took a total of 24 tablets, 12 in the evening and the following morning, taken with 16 ounces of water with each dose of 12 tablets; then drinking an additional 32 ounces of water with each dose. Colonoscopies were performed by blinded investigators. Cleansing efficacy was evaluated globally and segmentally using a 4-point scale (Excellent-no more than small bits of feces/fluid, which can be suctioned easily; achieves clear visualization of the entire mucosa); Good-feces/fluid requiring washing and suctioning, but still achieving clear visualization of the entire colon

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mucosa; Fair–enough feces after washing and suctioning to prevent clear visualization of the entire colon mucosa; Poor–large amounts of fecal residue and additional bowel preparation required.

Scores of Good or Excellent were considered to be a success. Safety was assessed by spontaneously reported adverse events, solicited ratings of expected prep symptoms and laboratory testing.

A high rate of cleaning success was seen with OST (92%), which was noninferior to PEG-EA (89%). Only a small proportion of patients rated their expected gastrointestinal symptoms as severe (less than 5%). No clinically significant differences were seen between the preps for chemistry and hematology parameters. No serious adverse experiences were reported with OST.

This preparation of sulfate tablets achieved a high level of cleansing in the study, compared with US FDA-approved preps. OST was noninferior to PEG-EA in this study and achieved significantly more excellent preps overall and in the proximal colon. The OST prep was well tolerated with a similar rate of spontaneously reported adverse experiences to PEG-EA and a low rate of severe expected gastrointestinal symptoms.

Di Palma, J., Bhandari, R., Cleveland, M., et al. "A Safety and Efficacy Comparison of a New Sulfate-Based Tablet Bowel Preparation Versus a PEG and Ascorbate Comparator in Adult Subjects Undergoing Colonoscopy." American Journal of Gastroenterology 2021; Vol. 116, pp. 319-328.

Barrett's Esophagus in Patients with Scleroderma

To assess the prevalence of Barrett's esophagus (BE) in a large cohort of patients with systemic sclerosis or scleroderma (SSc), women referred from the Mayo Clinic Arizona Rheumatology Clinic who completed EGD between 2002 and 2020 were included. Demographic and high-resolution manometry data were evaluated. The diagnosis of scleroderma was confirmed by an expert rheumatologist. The BE diagnosis was confirmed by an expert gastrointestinal pathologist.

A total of 235 women with SSc underwent EGD and high-resolution manometry (HRM) was completed in 172 patients. Women with SSc with BE were significantly more likely to have scleroderma esophagus (absent contractility with hypotensive lower esophageal sphincter), on HRM than women with SSc without BE.

There were 30 patients with SSc (12.8%), with histologically-proven BE. Dysplasia was found in 13 (43.3%), 4 with indefinite, 7 with low-grade and 2 with adenocarcinoma. The incidence of any dysplasia was 5.3% per year (0.9% per year for adenocarcinoma).

In this large study on prevalence of BE in patients with SSc, yielding a prevalence of 12.8%, women with SSc with BE were significantly more likely to have absent contractility with a hypotensive lower esophageal sphincter finding on HRM. The high prevalence and incidence of dysplasia found suggest that women with SSc should be included in the screening recommendations for BE.

Snyder, D., Crowell, M., Khan, A., et al. "Prevalence of Barrett's Esophagus in Female Patients with Scleroderma." American Journal of Gastroenterology, 2021; Vol. 116, pp. 517-521

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