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Courtesy Dr. Rosemary Haddock

GI has a role to play in this global threat, says Dr. Rosemary Haddock.

➤ FROM THE AGA JOURNALS

Climate change demands 'green' endoscopy

BY JIM KLING
MDedge News

Climate change is a global threat, and it presents a dual problem to health care: The system must address health threats that may be caused or exacerbated by climate change, while at the same time minimizing its environmental impact, according to the authors of a paper in Techniques and Innovations in Gastrointestinal Endoscopy (2021 Jun 13. doi: 10.1016/j.tige.2021.05.004).

Because of how often it is performed, endoscopy may have one of the highest environmental impacts of any health care procedure. Waste produced by endoscopy is the third-largest source in a typical hospital, equivalent yearly to burning 39 million pounds of coal or 13,500 tons of plastic. That makes endoscopy a key target in reducing the environmental footprint of health care, according to the authors, who were led by Rosemary Haddock, MBChB, MRCP,

See **Green** · *page 5*

AGA Clinical Practice Update: Expert Review

Be conservative with IBD dysplasia

BY WILL PASS
MDedge News

The American Gastroenterological Association recently published an expert review and clinical practice update addressing endoscopic surveillance and management of colorectal dysplasia in patients with inflammatory bowel disease (IBD).

Because of advances in therapy and surveillance over the past 2 decades, an updated approach is needed, according to authors led by Sanjay K. Murthy, MD, of Ottawa Hospital Research Institute and Fernando Velayos, MD, AGAF, from Kaiser Permanente San Francisco Medical Center.

"Not long ago, notions of imperceptible CRC [colorectal cancer] development and urgent need for colectomy in the face of dysplasia dominated IBD practice," the authors wrote in Gastroenterology (2021 Sep 1. doi: 10.1053/j.gastro.2021.05.063). "However, improvements in disease management, as well as endoscopic technology and quality, have dramatically changed the way in which we conceptualize and manage IBD-related dysplasia over the past 20 years."

Most notably, the authors called for a more conservative approach to

See **Dysplasia** · *page 10*

INSIDE

Multidisciplinary panel urges coordinated care for 'NASH epidemic'

BY MITCHEL L. ZOLER, PHD
MDedge News

A multidisciplinary panel of U.S. experts released a "Call to Action" for improved screening, diagnosis, and treatment of patients with nonalcoholic steatohepatitis (NASH) and nonalcoholic fatty liver disease (NAFLD) on July 26, an effort organized by the American Gastroenterological Association in collaboration with seven other U.S. medical organizations including several endocrinology groups.

The published statement, "Preparing for the NASH Epidemic: A Call to Action," proposes several urgent steps for the U.S. clinical community to provide bet-

See **Coordinated** · *page 16*

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LETTER FROM THE EDITOR

Seasons of change

The October issue of GI & Hepatology News marks the first of my tenure as Editor in Chief, accompanied by a talented group of associate editors that truly reflect the spirit and diversity of the AGA. Since its inaugural issue in January 2007, the newspaper has evolved into a trusted source of clinically relevant updates on emerging practice trends and technological advances. I am honored to serve as the fourth editor of GIHN, building on the strong foundation set by former editors Charles J. Lightdale, MD, AGAF; Colin W. Howden, MD, AGAF; and most recently John I. Allen, MD, MBA, AGAF. Each of them has played an instrumental role in the publication's growth and success over the past 15 years.

Dr. Adams

GIHN is unique among AGA's flagship publications in that it is designed to bring together content from a variety of sources, including innovative scientific research from leading academic journals, practice management updates, and information regarding emerging policy initiatives impacting frontline GI practice. It also provides a platform to highlight AGA's important work on behalf of its members. My goal as EIC is to continue to curate high-yield content that has the potential to directly impact how we manage our patients and practices. Several new initiatives are planned, which I am excited to introduce over the next few months. My door is always open, and I welcome your feedback about how GIHN can best serve the needs of AGA's diverse membership in both academics and community practice.

GI & Hepatology News "is unique among AGA's flagship publications in that it is designed to bring together content from a variety of sources."

Highlights of this month's issue include updates on a unique multidisciplinary collaboration designed to promote a coordinated response among health care providers in caring for patients with NAFLD/NASH and AGA's Clinical Practice Update on dysplasia management in patients with IBD. If you haven't already, please consider nominating yourself or a colleague for an AGA committee appointment – the deadline is Nov. 1, and this is a fantastic way to contribute to the national dialogue on important issues affecting frontline GI practice.

Megan A. Adams, MD, JD, MSc

aga community

Top patient case

Physicians with difficult patient scenarios regularly bring their questions to the AGA Community (https://community.gastro.org) to seek advice from colleagues about therapy and disease management options, best practices, and diagnoses. Here's a preview of a recent popular clinical discussion:

Junaid Beig, MBBS, FRACP, wrote the following in "Subtherapeutic Azathioprine metabolites despite being adherent to medication":

"I have an Ulcerative patient (Pancolitis) on Mesalazine and Azathioprine 150 mg since 2018. His levels are subtherapeutic (6TGN 159 and 6MMP 70) despite being adherent to medication. He drinks 2 liters of wine per week.

"Questions: Is there any way we can find if he has high TPMT activity (Level is normal 6.1)? Does alcohol have an impact on TPMT activity? Does he warrant alternative treatment?"

See how AGA members responded and join the discussion: https://community.gastro.org/posts/25109.

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VARSITY: Histologic outcomes explored

BY JIM KLING
MDedge News

In patients with moderate to severe ulcerative colitis (UC), treatment with vedolizumab leads to better histologic outcomes than treatment with adalimumab, according to findings from the VARSITY trial.

The findings come from an analysis in Gastroenterology (2021 Jun 15. doi: 10.1053/j.gastro.2021.06.015) of prespecified histologic exploratory endpoints from the phase 3, multicenter, randomized, controlled VARSITY trial, which was the first head-to-head comparison of two biologics in UC. VARSITY demonstrated improved rates of clinical remission and endoscopic improvement at week 52 with vedolizumab.

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The authors, led by Laurent Peyrin-Biroulet of the department of gastroenterology at Nancy (France) University Hospital, noted that there is consensus that endoscopic improvement is considered the best endpoint for demonstrating effective maintenance therapy in UC. However, they added that "endoscopic changes do not necessarily reflect quiescent microscopic disease, and complete resolution of mucosal inflammation can only be confirmed by histologic assessment." Still, histologic outcomes are not currently recommended as a goal of therapy in clinical practice, possibly because of a lack of standardized and validated scoring systems suitable for routine clinical use.

To assess histologic outcomes in the two treatment regimens, the researchers included the Geboes Index score and the Robarts Histopathology Index (RHI) as two validated scoring systems.

During the 52-week study, 769 patients were assigned to vedolizumab (300 mg IV) or adalimumab (40 mg subcutaneously).

At week 14 and week 52, more patients in the vedolizumab group achieved histologic remission as determined by Geboes Index score less than 2 (week 52, 29.2% vs. 8.3%; difference, 20.9%; 95% confidence interval, 15.6%-26.2%; $P < .0001$) and RHI score of 2 or less (week 52, 37.6% vs. 19.9%; difference, 17.6%; 95% CI, 11.3%-23.8%; $P < .0001$).

At week 52, more patients in the vedolizumab group achieved minimum histologic disease activity as determined by Geboes Index score of 3.1 or less (45.7% vs. 30.8%; difference, 14.8%; 95% CI, 8.0%-21.5%; $P < .0001$) and RHI score of 4 or less (42.3% vs. 25.6%; difference, 16.6%; 95% CI, 10.0%-23.1%; $P < .0001$).

The investigators performed post hoc analyses of mucosal healing, defined as a composite of the histologic and endoscopic outcomes, with the latter defined as Mayo endoscopic subscore of 1 or less. A greater proportion of patients treated with vedolizumab than with adalimumab met the composite of histologic remission on each score plus endoscopic improvement (Geboes, 35.0%

Continued on following page

Endoscopy has climate impacts, too

Green *from page 1*

of Ninewells Hospital in Dundee, Scotland.

Climate change has direct impacts on health, ranging from the effects of wildfire smoke and pollution on respiratory and cardiac health to food insecurity, heat stroke, and alterations to the geographic ranges of vector-borne diseases. It also raises the risk of future pandemics like COVID-19. "Climate change is a major threat to health and threatens to undermine the last 50 years of public health gains," the authors wrote.

Although the effects of climate change on gastrointestinal diseases has not been studied as extensively as other organ systems, there are known impacts. These include more gastrointestinal infections at higher temperatures, the risk of enteric pathogens and viral hepatitis as a result of flooding and higher water temperatures, and malnutrition caused by the disruption of food crops and distribution. "It seems a little unlikely that the organs which we are interested in as gastroenterologists and hepatologists are largely exempt from the direct effects of hotter temperatures, when every other human organ system appears to be affected almost without exception," the authors wrote.

Those issues put an onus on health care to address climate change, not only in health care delivery but also to find ways to reduce emissions as an industry. Hospitals and other large facilities can act as "anchor institutions" that set an example within the community and influence others since they procure goods and services and own assets and land. To date, few institutions have adopted this stance.

A key question is how health care institutions can reduce resource use while maintaining quality of care. One approach is to identify areas of medical overuse, where wasteful practices have no patient benefit. The authors believe that a reduction in endoscopic procedures could have one of the largest impacts on carbon emissions. They emphasized that reduced numbers of procedures would likely have greater effect than making procedures "greener."

Some endoscopic procedures offer little value to the patient. The approach of screening to combat disease, introduced in 1968, should be challenged in some patient groups because it can lead to unnecessary procedures.

The American Gastroenterological Association has identified some procedures as commonly overused, including screening colonoscopy in average-risk individuals, surveillance colonoscopy for low-risk polyps, and surveillance esophagogastroduodenoscopy in Barrett's esophagus. The authors note that performing fewer endoscopies will require shifts in behavior, referral patterns, education, and culture, all of which will take time.

In the meantime, endoscopists can take some steps to reduce the footprint of existing procedures: Source supplies through sustainable means, which is important because supply-chain emissions account for more than half of health care emissions; seek out sources of renewable energy; use their institution's status as an "anchor institution" to pressure suppliers into using sustainable practices; evaluate less invasive procedures, such as Cytosponge or fecal immunochemical test; employ reusable or recyclable equipment; minimize the use of nitrous oxide, which is a key greenhouse gas; segregate infectious waste; and develop multiple recycling streams.

The authors have no relevant financial disclosures.

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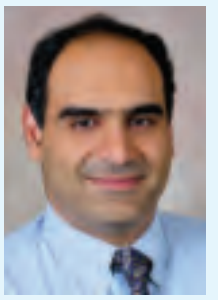
Endoscopy has a large environmental impact and generates the third-highest amount of waste in health care facilities. Its annual CO_2 emissions in the United States are equivalent to 39 million pounds of coal. Mining of elements used in endoscopy equipment such as molybdenum and titanium is destructive to the environment.



Dr. Sharzehi

Climate change has direct impacts on health, ranging from the effects of wildfire smoke and pollution on respiratory and cardiac health to food insecurity and alterations to the geographic ranges of vector-borne diseases and enteric pathogens. Paradoxically, health care is both affected by, and contributes to, the problem.

The authors state that this puts an onus on health care to address climate change, not only in health care delivery but also to find ways to reduce emissions as an industry.

A key question posed by the authors is how health care institutions can reduce use of resources while maintaining quality of care. They emphasize the importance of both local/individual changes and the support of national bodies and institutions to achieve these goals. There is an urgent need to incentivize development of greener endoscopy units, to increase focus on studies tackling medical excess, and for behavioral change to reduce unnecessary procedures.

Kaveh Sharzehi, MD, MS, is the medical director of endoscopy and associate professor of medicine, division of gastroenterology and hepatology, Oregon Health & Science University. He has no conflicts.

Continued from previous page

vs. 20.2%; RHI, 33.7% vs. 18.1%), with similar findings for minimal histologic disease activity plus endoscopic improvement (Geboes, 35.0% vs. 20.2%; RHI, 33.7% vs. 18.1%).

The authors noted that the RHI scoring system revealed greater associations between histologic outcomes and endoscopic improvement, which is an important finding considering the European Crohn's and Colitis Organisation's stance advising consideration of mucosal healing based on findings from endoscopy and histology (J Crohns Colitis. 2020 Nov 7;14[11]:1503-11).

Some study limitations included how the study design precluded dose escalation and a lack of long-term follow-up among these patients.

The researchers believe that the RHI score may be a better choice than the Geboes score for comparing efficacy in clinical trials because RHI is more reproducible, is more sensitive to change, and is comparatively easy to interpret.

The study was funded by Takeda, which makes vedolizumab. The authors disclosed several relationships with industry, including some having stock options with or being employed by Takeda.

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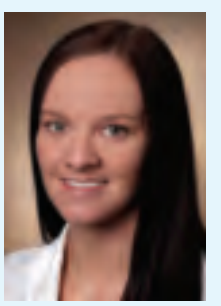
Over the past decade, there have been evolving goals in the treatment of inflammatory bowel disease patients. Goals of treatment now go further than symptom-based remission, and health care providers strive for endoscopic remission to improve quality of life and prevent disease complications. In the past few years, there has been growing evidence that histologic remission in ulcerative colitis (UC) may be a more beneficial target to achieve. This study by Peyrin-Biroulet and colleagues explores histologic outcomes within the VARSITY trial with the finding that vedolizumab led to more patients achieving histologic improvement, compared with those who were randomized to adalimumab. The findings of histologic improvement with vedolizumab in this study parallel the "larger" outcomes of the VARSITY trial, which found that vedolizumab provided superior clinical remission and endoscopic improvement at week 52.



Dr. Dalal

Another important element of this study was the exploration of association between endoscopic and histologic outcomes using two validated histologic indices (the Geboes Index score and the Robarts Histopathology Index). While both indices showed moderate agreement overall between histologic activity and endoscopic improvement, the Robarts score correlated better with endoscopic improvement. Therefore, the authors propose that the Robarts scoring system may be the better index for assessing histologic outcomes. This is important because standardized scoring systems would be needed to translate histologic outcomes as a goal in real clinical practice.

The landscape continues to evolve for treatment goals in UC. Symptom control is the tip of the iceberg, and endoscopic along with histologic control may lead to a more durable remission.

Robin Dalal, MD, is an assistant professor of medicine at Vanderbilt University Medical Center, Nashville, Tenn. She has nothing to disclose.

Large study shows South Korean siblings face high familial IBD risk

BY JIM KLING
MDedge News

Among Asian Pacific populations, the first-degree relatives (FDRs) of individuals with inflammatory bowel disease (IBD) have a significantly increased risk for IBD themselves, according to a large analysis of data from South Korea. The greatest risk was found in siblings and for Crohn's disease (CD).

The analysis of the South Korean Health Insurance Database included a cohort of 21,940,795 individuals from about 12 million families, and included data collected between 2002 and 2017 (Clin Gastroenterol Hepatol. 2020 Oct 1. doi: 10.1016/j.cgh.2020.09.054).

Previous studies have examined risk of IBD and familial relationships with existing IBD patients, but they have been subject to biases and have been heterogeneous in design.

Previous studies have examined risk of IBD and familial relationships with existing IBD patients, but they have been subject to biases and have been heterogeneous in design, according to the authors, led by co–first authors Hyun Jung Kim, MD, of Korea University in Seoul, South Korea, and Shailja C. Shah, MD, of Vanderbilt University in Nashville, Tenn. There are few true population-based studies that quantify specific risks for family members of IBD patients, and none that were conducted in non-Western populations.

There are concerns about extrapolating familial IBD risk estimates from Western European populations to Asian populations because new data suggest that there are both genetic and nongenetic disease risk factors that reflect geography and ethnicity, the authors noted.

The researchers identified 45,717 individuals with ulcerative colitis (UC) and 17,848 with CD. Mean annual incidence rates were 4.6 cases of UC and 3.2 cases of CD per 100,000 person-years, which was relatively stable across the study period.

In all, 3.8% of UC and 3.1% of CD diagnoses occurred in FDR's of existing patients. Among those with an FDR with IBD, the incidence of UC and CD was 54.5 and 99.2 per 100,000 person-years, respectively. When compared with individuals who had no FDRs with IBD, subjects who had an FDR with CD were at a more than 20-fold increased risk of CD (incident rate ratio, 22.2; 95% confidence interval, 20.5-24.5), whereas individuals with an FDR with UC were at a little more than a 10-fold risk for UC (IRR, 10.2; 95% CI, 9.39-11.1).

Subjects with an FDR with CD were at higher risk of UC (IRR, 3.56; 95% CI, 2.77-4.50), and those with an FDR with UC were at higher risk of CD (IRR, 2.94; 95% CI, 2.45-3.49). After adjustment for smoking, having an FDR with IBD was associated with an almost 8-fold increased risk of UC (IRR, 7.94; 95% CI, 6.98-9.03) and a nearly 20-fold increased risk of CD (IRR, 19.03; 95% CI, 15.58-23.25).

The investigators also performed an analysis based on type of relative, with matching relations with unaffected relatives as the reference for each comparison. The highest risk for incident CD was with twin siblings (IRR, 336.2; 95% CI, 235.0-481.1) followed by nontwin siblings (IRR, 27.6; 95% CI, 24.6-30.9). The risk of CD among offspring of an affected father was 9.40 (95% CI, 6.81-13.0) and 6.54 (95% CI, 4.17-10.3) for offspring of affected mothers. There was a similar pattern for UC, although the magnitude was smaller: 163.7 for twin siblings (95% CI, 105.6-253.9), 13.1 for nontwin siblings (95% CI, 11.4-15.0), 7.11 for offspring of affected fathers (95% CI, 6.10-8.29), and 8.77 for offspring of affected mothers (95% CI, 7.46-10.3).

The researchers found no evidence of a birth cohort effect. Family history and IBD risk is a complicated relationship because family history includes shared genetics, as well as similar environmental exposures, and gene-environment interactions can add another layer of uncertainty. Previous studies have found that asymptomatic family members of IBD patients sometimes have preclinical signs such as changes in intestinal permeability, immune function, and the microbiome, as well as biomarker levels.

Family history includes shared genetics, as well as similar environmental exposures, and gene-environment interactions can add another layer of uncertainty.

IBD has emerged recently among Asian Pacific populations as a serious health concern, with a recent rapid increase. This may reflect a shift in potentially modifiable environmental triggers. "Precisely quantifying familial risk and patterns might enable more accurate risk counseling and better-targeted clinical surveillance for earlier diagnosis and treatment among FDRs. Moreover, an accurate definition of familial IBD risk across populations also might inform subsequent investigations untangling the various shared environmental and genetic contributions," the authors wrote.

Although genetic susceptibility is generally accepted as the predominant driver in familial trends for IBD, the authors noted their "study was not designed to determine the contribution of genetic vs. nongenetic determinants to familial IBD risk, and future well-designed dedicated investigations are needed to provide this clarity."

The study is limited by the relatively short follow-up period, which may not have captured all IBD cases within patients' families.

The authors have no relevant financial disclosures.

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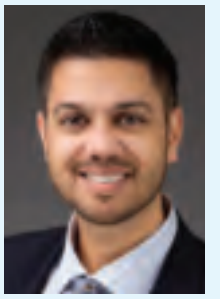
One of the most common concerns to arise among patients newly diagnosed with inflammatory bowel disease (IBD) is whether their family members or children are at risk for also developing the condition. The study by Kim and colleagues observed that first-degree relatives of IBD patients were 20 times more likely to be diagnosed with Crohn's disease and 10 times more likely to be diagnosed with ulcerative colitis, compared with individuals who had no first-degree relatives with IBD. The authors also observed that the risk for developing IBD was incremental based on the number of affected first-degree relatives. Most notably, they were able to quantify the risk for children of IBD patients and observed that children born to fathers or mothers with IBD were seven to eight times more likely to be diagnosed with IBD.


Dr. Dulai

One of the hallmarks of effective IBD management is early disease intervention to modify the natural history. This work will be instrumental in counseling patients' families on the need to monitor for subclinical red flag or early warning signs, and it will be important to recognize that male and female IBD patients will both need to be counseled equally on the risk of offspring developing IBD. Further work will be needed to understand whether modifiable risk factors can be identified to help prevent the development of IBD in these at-risk individuals and whether specific mutations are responsible for multilineage IBD syndromes affecting several generations or multiple first-degree relatives.

Parambir S. Dulai, MD, is an assistant professor in the division of gastroenterology and hepatology at University of California, San Diego. He has no relevant conflicts of interest.

Improving quality and return on investment: Onboarding

BY JOHN D. RUDNICK JR, EDD, FACHE, AND JAMES A. TURNER JR, MBA, MHA

Physician and advanced practice provider (APP) (collectively, "provider") onboarding into health care delivery settings requires careful planning and systematic integration. Assimilation into health care settings and cultures necessitates more than a 1- or 2-day orientation. Rather, an intentional, longitudinal onboarding program (starting with orientation) needs to be designed to assimilate providers into the unique culture of a medical practice.

Communication concerning mutual expectations is a vital component of the agreement between provider and practice.

Establishing mutual expectations

Communication concerning mutual expectations is a vital component of the agreement between provider and practice. Items that should be included in provider onboarding (likely addressed in either the practice visit or amplified in a contract) include the following:

- **Committees:** Committee orientation should include a discussion of provider preferences/expectations and why getting the new provider involved in the business of the practice is a priority of the group.
- **Operations:** Key clinical operations details should be reviewed with the incoming provider and reinforced through follow-up discussions with a physician mentor/coach (for example, call distribution; role of the senior nonclinical leadership team/accountants, fellow practice/group partners, and IT support; role definitions and expectations for duties, transitioning call, and EHR charting; revenue-sharing; supplies/preferences/adaptability to scope type).
- **Interests:** Specific provider interests (for example, clinical research, infusion, hemorrhoidal banding, weight loss/nutrition, inflammatory bowel disease, irritable bowel disease, pathology) and productivity expectations (for example, number of procedures, number of new and return patient visits per day) should be communicated.
- **Miscellaneous:** Discussion about marketing the practice, importance of growing satellite programs and nuance of major referral groups to the practice are also key components of the assimilation process.

Continued on following page

AGA Career Compass app

We've launched a new app designed to help AGA trainees and early-career members navigate each step along their GI career path. Once users get started by setting up their professional profile, AGA Career Compass offers curated resources on topics like career planning, clinical education, and leadership skills.

The Connections Corner section hosts experienced mentors and matches them with users based on profile compatibility and shared topics of interest, such as grant writing, setting up a lab, navigating career options in academic medicine, managing burnout, and more. Download the app today to branch out from your institution or practice and receive personalized career guidance.

Now available in Apple and Google Play stores.

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Leadership self-awareness and cultural alignment

Leadership self-awareness is a key element of provider onboarding. Physicians and APPs are trained to think independently and may be challenged to share decision-making and rely on others. The following are some no-cost self-assessment and awareness resources:

- **Myers-Briggs Personality Profile Preferences:** http://www.lifeconnectionsonline.org/wp-content/uploads/2014/12/Keirsey-Temperament-Sorter.pdf
- **VIA Strengths:** https://www.viacharacter.org/survey/account/Register
- **VARK Analysis:** https://vark-learn.com/the-vark-questionnaire/

Cultural alignment is also a critical consideration to ensure orderly assimilation into the practice/health care setting and with stakeholders. A shared commitment to embed a culture with shared values has relevance to merging cultures – not only when organizations come together – but with individuals as well. Time spent developing a better understanding of the customs, culture, and traditions of the practice will be helpful if a practice must change its trajectory based on meeting an unmovable obstruction (for example, market forces requiring practice consolidation).

Improved quality

Transitioning a new provider into an existing practice culture can have a ripple effect on support staff and patient satisfaction and is, therefore, an important consideration in provider onboarding. Written standards, procedures, expectations, and practices are always advisable when possible. Attention to the demographics of the recruited physician is also important with shifts in interests and priorities from a practice. Millennials will constitute most of the workforce by 2025 and arrive with a mindset that the tenure in a role will be shorter than providers before them. Accordingly, the intentionality of the relationship is critical for successful bonding.

If current physician leaders want to achieve simultaneous succession planning and maintain the legacy of a patient-centric and resilient practice, these leaders must consider bridging the "cultural knowledge acumen gap." James S. Hernandez, MD, MS, FCAP, and colleagues suggest a "connector" role between new and experienced providers. Reverse mentoring/distance/reciprocal mentoring is also mentioned as a two-way learning process between mentor and mentee.

Effective provider onboarding gives the incoming provider a sense of purpose and resolve, which results in optimized clinical productivity and engagement because the new provider is invested in the future of the practice.

Process structure considerations

Each new hire affects the culture of the practice. Best practices for the onboarding and orientation process should be followed. A written project master list with a timeline for completion of onboarding tasks with responsible and accountable persons, target dates for completion, and measurement should be established. Establishing mutual expectations up front can help practices tailor committee roles and clinical responsibilities to maximize provider engagement and longevity. A robust onboarding process may take up to 2 years depending on the size of the practice and the complexity of its structure and associated duties.

Desired outcomes

The desired outcome of the onboarding process is a satisfied provider whose passion and enthusiasm for quality patient care is demonstrated objectively through excellent performance on clinical quality measures and metrics of patient and referral source satisfaction.

Periodic reviews of how the onboarding process is progressing should be undertaken. These reviews can be modeled after the After-Action Review (AAR) process used in the military for measuring progress. Simply stated, what items went well with onboarding and why? What items did not go well with onboarding and why not? (Consider something like the Center for Medicare & Medicaid Services' "5 Whys" assessment to determine root cause for items that need correction.) What elements of the onboarding process could be further improved? Using a Delphi method during the AAR session is an excellent way for the group to hear from all participants ranging from senior partners to recently recruited providers.

Conclusion

Medical practices must recognize that assimilating a new provider into the practice through a robust onboarding process is not lost effort but rather a force multiplier. Effective provider onboarding gives the incoming provider a sense of purpose and resolve, which results in optimized clinical productivity and engagement because the new provider is invested in the future of the practice. Once successfully onboarded and integrated into the practice, new providers need to understand that the work effort invested in their onboarding comes with a "pay it forward" obligation for the next provider recruited by the group. Group members also need to realize that the baseline is always changing – the provider onboarding process needs to continually evolve and adapt as the practice changes and new providers are hired.

Mr. Rudnick is a visiting professor and program director health care quality, innovation, and strategy at St Thomas University, Miami. Mr. Turner is regional vice president for the Midatlantic market of Covenant Physician Partners. They have no conflicts.

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COVID-19: New GI symptoms don't raise death risk

BY HEIDI SPLETE
MDedge News

Death from COVID-19 was not more likely among patients with inflammatory bowel disease (IBD) who had COVID-19 who developed new GI symptoms after becoming infected, according to international registry data from nearly 3,000 adults.

Although GI symptoms may arise in the general population of COVID-19 patients, data on the association between GI symptoms and COVID-19 in patients with IBD are limited, as are data on the association of GI symptoms and COVID-19 outcomes in this population, Ryan C. Ungaro, MD, of the Icahn School of Medicine at Mount Sinai, New York, and colleagues wrote.

In a study published in Inflammatory Bowel Diseases (2021 Jul. doi: 10.1093/ibd/izab184), the researchers identified 2,917 adults with IBD who developed COVID-19 using the Surveillance Epidemiology of Coronavirus Under Research Exclusion in Inflammatory Bowel Disease (SECURE-IBD) database, a global registry created to understand COVID-19 outcomes in IBD patients.

The researchers recorded all new GI symptoms experienced by the patients while they were infected with COVID-19. Overall, 764 (26.2%) experienced new GI symptoms and 2,153 did not. The most common symptom was diarrhea, reported by 80% of the patients, followed by abdominal pain in 34%. Nausea and vomiting were reported by 24% and 12%, respectively, of all patients.

The average age of the patients was 43 years for those with no new GI symptoms and 40 for those without new GI symptoms; overall, approximately half were women and approximately three-quarters were White. Overall, 50% of those with new GI symptoms were in remission, as was the case for 58.4% of those without.

IBD patients who developed new GI symptoms were significantly more likely to be women, of Asian race, older, or have at least one comorbidity.

The researchers found no difference in new GI symptoms in patients with Crohn's disease and ulcerative colitis. "Patients on any medication – but in particular [tumor necrosis factor] antagonist monotherapy – were less likely to report new GI symptoms." they wrote.

Although IBD patients with new GI symptoms were significantly more likely than were those without new GI symptoms to be hospitalized for COVID-19 in bivariate analyses (31.4% vs. 19.2%; $P < .001$), they were not more likely to need a ventilator or intensive care (5.8% vs. 4.6%; $P < .18$). In a multivariate analysis, IBD patients with new GI symptoms had no greater risk of death from COVID-19 than did those without new GI symptoms (adjusted odds ratio, 0.72; 95% confidence interval, 0.38-1.36).


Dr. Ungaro

Although GI symptoms may arise in the general population of COVID-19 patients, data on the association between GI symptoms and COVID-19 in patients with IBD are limited.

The new-onset GI symptoms common to IBD patients with COVID-19 are not likely caused by underlying disease activity, given the number of patients in remission who reported new GI symptoms, the researchers wrote.

The study findings were limited by several factors including the retrospective design, potential reporting bias, and reliance on physician global assessment for disease assessment, the researchers noted. However, the results were strengthened by the large sample size, by the ability to assess GI symptoms before and after COVID-19, and by the evaluation of GI symptoms and COVID-19 outcomes.

"In summary, new GI symptoms are common in IBD patients with COVID-19 and are not associated with an increased risk of death due to COVID-19," the researchers concluded. "Our findings suggest that an increase in GI symptoms in IBD patients should prompt consideration of a COVID-19 diagnosis."

Data to guide clinical care

"There are several potential causes for common GI symptoms, such as diarrhea and abdominal pain, among patients with IBD," Shirley Cohen-Mekelburg, MD, of the University of Michigan, Ann Arbor, said in an interview. "These can be the initial presentation of an IBD flare, a noninflammatory cause such as irritable bowel syndrome, small intestinal bacterial overgrowth, or an infection such as *Clostridioides difficile* or SARS-CoV-2. Each of these diagnoses require different treatments. An IBD flare may require escalation of immunosuppressive medications such as biologics or corticosteroids, which can cause harm in the context of an untreated infection. Therefore, any guidance that will increase health care providers' awareness of the possible causes of similar GI symptoms is important in caring for our patients with IBD. This is especially true in context of a newer entity such as COVID-19 with which we are overall less familiar."

"Any guidance that will increase health care providers' awareness of the possible causes of similar GI symptoms is important in caring for our patients with IBD."


Dr. Cohen-Mekelburg

Dr. Cohen-Meckelburg said the lack of association between GI symptoms and death in IBD is reassuring. "It is interesting to note that GI symptoms, and particularly new diarrhea, were very common among patients with IBD and COVID-19," she added.

"Every study has its limitations, which need to be considered in interpreting findings," Dr. Cohen-Meckelburg noted . "SECURE-IBD has provided great insight into COVID-19 infections among patients with IBD. However, the registry relies on individuals reporting cases, so there is the potential for underreporting, particularly with less symptomatic or subclinical cases."

"Health care providers who treat patients with IBD should have a high-index of suspicion for SARS-CoV-2 infections when patients with IBD present with GI symptoms," said Dr. Cohen-Meckelburg. "The data from the current study may help us to consider standard testing to rule out COVID-19 as an alternative diagnosis when considering whether to treat patients with IBD who develop new GI symptoms for an IBD flare. This would be similar to how we currently test for *C. difficile* and other enteric infections before treating IBD flares.

"This approach – considering the possibility of COVID-19 in the context of new GI symptoms – is consistent with the AGA's published guidelines and best practices," said David Leiman, MD, MSHP, of Duke University, Durham, N.C., and Chair of the AGA's Quality Committee. "Clinicians should also be aware of the possibility for variation in implementation of this approach, with some patients potentially at risk for disparate testing practices." As outlined by the AGA's Quality Committee, tracking adherence to this clinical approach through ongoing quality improvement may limit the development of such gaps in care.

The study was supported in part by the Helmsley Charitable Trust with additional funding provided by Pfizer, Takeda, Janssen, AbbVie, Lilly, Genentech, Boehringer Ingelheim, Bristol-Myers Squibb, Celtrion, and Arenapharm. Lead author Dr. Ungaro disclosed serving as an advisory board member or consultant for AbbVie, Bristol-Myers Squibb, Janssen, Eli Lilly, Pfizer, and Takeda and research support from AbbVie, Boehringer Ingelheim, and Pfizer. Other coauthors disclosed similar relationships with other pharmaceutical companies. Dr. Cohen-Mekelburg and Dr. Leiman had no financial conflicts to disclose.

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At-home fecal calprotectin test shows efficacy

BY JIM KLING
MDedge News

In a real-life setting, fecal calprotectin (FC) home testing performed well at predicting disease endoscopic activity in patients with inflammatory bowel disease (IBD) being treated with adalimumab.

The study, published in the European Journal of Gastroenterology & Hepatology (2021 Jul 19. doi: 10.1097/MEG.0000000000002248), could be a boon to patients and physicians employing the treat-to-target (T2T) strategy, which relies on disease monitoring through methods like endoscopy, histology, and serum and fecal biomarkers.

One goal of T2T is to identify patients who are asymptomatic in order to prevent or minimize flare-ups. FC has gained attention in recent years as it outperforms serum biomarkers in its correlation with clinical, endoscopic, and histological disease activity. Consecutive FC measurements predict disease relapse among asymptomatic patients with high specificity and sensitivity.

In what they described as the first real-life study of its kind, researchers offered at-home FC testing every 4 months to 65 current IBD patients taking adalimumab at the University Hospital of Heraklion, University of Crete, Irakleio, Greece.

Abnormal FC values were confirmed with a follow-up test 1 month later, after which point a colonoscopy was scheduled to inform treatment modification. Twenty-four patients (37% of the population) had two positive tests, and 19 who were able underwent colonoscopy. Twelve patients (19%) underwent adalimumab dose intensification, 9 (14%) switched to a different biologic, and 2 (3%) had surgery.

The group of patients who required treatment modification had a significantly higher median FC concentration of 761 mcg/g (37% had values ≥1,000 mcg/g), compared with a median concentration of 108 mcg/g for those who did not have their dose modified ($P < .0001$). With a cutoff of 250 mcg/g, FC correctly identified a need for treatment with an area under the receiver operating characteristic curve (AUC) value of 0.90 (95% confidence interval, 0.80-0.96).

A cutoff greater than 413 mcg/g appears optimal for predicting endoscopic disease, with a sensitivity of 75%, a specificity of 76%, a positive likelihood ratio of 3.12, and a negative likelihood ratio of 0.33.

"Home monitoring of disease activity and drug levels will be a paradigm shift in management of IBD. ... I often explain to people that using a tool like this would be similar to patients with diabetes checking their blood sugar – getting a feel for what's actually happening closer to the time that it's happening, rather than waiting for it to progress," commented David T. Rubin, MD, AGAF, a professor of medicine and the codirector of the digestive diseases center at the University of Chicago, and the chair of the scientific advisory committee for the Crohn's & Colitis Foundation, who did not participate in the study.

The authors reported no conflicts of interest. Dr. Rubin has consulted for TECHLAB.

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AGA Resource
Help your patients better understand their IBD treatment options by sharing AGA's patient education, "Living With IBD," in the AGA GI Patient Center at www.gastro.org/IBD.

Detection can be tricky

Dysplasia *from page 1*

sample collection and intervention.

"The practices of taking nontargeted biopsies and of referring patients for colectomy in the setting of low-grade or invisible dysplasia are being increasingly challenged in favor of 'smart' approaches that emphasize careful inspection and targeted sampling of visible and subtle lesions using newer technologies ... as well as endoscopic management of most lesions that appear endoscopically resectable," the authors wrote. "Indeed, surgery is being increasingly reserved for lesions harboring strong risk factors for invasive cancer or when endoscopic clearance is not possible."

The 14 best practice advice statements cover a variety of topics, including appropriate lesion terminology and characterization, endoscopy timing, and indications for biopsies, resection, and colectomy.

"The proposed conceptual model and best practice advice statements in this review are best used in conjunction with evolving literature and existing societal guidelines as part of a shared decision-making process," the authors noted.

Lesion descriptions

First, the authors provided best practice advice for retirement of three older terms: "dysplasia-associated lesion or mass, adenoma-like mass, and flat dysplasia." Instead, they advised sorting precancerous colorectal lesions into one of three categories: nonpolypoid (less than 2.5 mm tall), polypoid (at least 2.5 mm tall), or invisible (if detected by nontargeted biopsy).

According to the update, lesion descriptions should also include location, morphology, size, presence of ulceration, clarity of borders, presence within an area of past or current colitis, use of special visualization techniques, and perceived completeness of resection.

Surveillance timing

All patients with chronic IBD should undergo colonoscopy screening for dysplasia 8-10 years after diagnosis, the authors wrote. Subsequent colonoscopies should be performed every 1-5 years, depending on risk factors, such as family history of colorectal cancer and quality of prior surveillance exams.

Higher-risk patients may require colonoscopies earlier and more frequently, according to the update. Patients diagnosed with primary sclerosing cholangitis, for instance, should undergo immediate colonoscopy, while patients at high risk of dysplasia (such as those with prior CRC) should undergo annual pouch surveillance.

General principles and surveillance colonoscopy

"Conditions and practices for dysplasia detection should be optimized," the authors wrote, "including control of inflammation, use of high-definition endoscopes, bowel preparation, careful washing and inspection of all colorectal mucosa, and targeted sampling of any suspicious mucosal irregularities."


Dr. Murthy

Endoscopists should consider use of dye spray chromoendoscopy, "particularly if a standard definition endoscope is used or if there is a history of dysplasia," the authors wrote. Alternatively, virtual chromoendoscopy may be used in conjunction with high-definition endoscopy.

Biopsy, resection, and colectomy

According to the update, if chromoendoscopy is used, then biopsies should be targeted "where mucosal findings are suspicious for dysplasia or are inexplicably different from the surrounding mucosa."

If chromoendoscopy isn't used, then the authors advised clinicians to also perform nontargeted biopsies, ideally four per 10 cm of colon, in addition to targeted biopsies of suspicious areas.

When lesions are clearly demarcated and lack submucosal fibrosis or stigmata of invasive cancer, then endoscopic resection is preferred. Mucosal biopsies are usually unnecessary, "unless there are concerns about resection completeness."

"If the resectability of a lesion is in question, referral to a specialized endoscopist or inflammatory bowel disease center is suggested," wrote the authors.

They noted that, if visible dysplasia is truly unresectable or if invisible multifocal/high-grade dysplasia is encountered, then colectomy should be performed.

IBD control

Finally, the authors emphasized the importance of adequately managing IBD activity to reduce dysplasia risk.

"Because CRC risk in IBD is primarily driven by inflammation, and available data do not demonstrate a clear independent chemopreventive effect of available agents, the focus of chemoprevention in IBD should be control of inflammation," they wrote.

The expert review was commissioned and approved by the AGA Institute Clinical Practice Updates Committee and the AGA Governing Board. The authors disclosed no conflicts of interest.

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Should IBD biologics be offered in combination or as monotherapy?

BY JIM KLING
MDedge News

Adding or switching biologics is a common practice in the treatment of patients with inflammatory bowel disease (IBD), but there is a dearth of clinical data on whether patients should receive their first or second biologic as monotherapy or combined with immunomodulatory therapies. It's a clinical conundrum made more difficult by the increasing number of biologics and drugs available to treat IBD, and the fact that some first-line biologics may fail because of immune responses.

The authors of a new review led by Roni Aoun, MD, published in the Journal of Clinical Gastroenterology (2021 Jul. doi: 10.1097/MCG.0000000000001591) sought to provide some much-needed advice on these issues, surveying the literature that does exist in order to offer evidence-based recommendations for how and when biologics should be used.

A confusing array of therapeutic choices

The review arrives at a moment when IBD treatments have hit a therapeutic plateau, producing remission rates of only around 30%-35%, despite new treatments and mechanisms of action. "That's just not where we want to be [so] there's a lot of interest in how we can make our therapies better," said David T. Rubin, MD, AGAF, a professor of medicine and the codirector of the Digestive Diseases Center at the University of Chicago, and the chair of the scientific advisory committee for the Crohn's & Colitis Foundation.

Dr. Rubin, who did not participate in authoring the review, added that the field also faces questions of what patients should receive after their first has either failed to work entirely or the initial response has waned.

"Understanding sequencing is important," he said. "The best way to assess that right now has been through claims data, which are notoriously missing important information like [disease activity]."

The landmark SONIC and SUCCESS studies concluded that combining antibodies with immunomodulatory drugs was the best approach, but times have changed since these results were published. One recent study showed that the patient's HLA subtype can be associated with anti–tumor necrosis factor (TNF) immune responses.

"We now know that you can be much more specific and precise about this. You can predict the likelihood someone's going to have antidrug antibodies against an anti-TNF [agent]," said Dr. Rubin.

Some data suggest that, in patients who produced antibodies to an initial anti-TNF agent, combination therapy can provide benefit with a second anti-TNF biologic.

Factors that go into the decision of whether to prescribe an immunomodulator include the class of biologic, whether it is a first or second biologic, the presence or absence of antidrug antibodies, patient preference, and any comorbid conditions.

Anti-TNF agents often lose efficacy, with one study finding an average 41% loss of response to certolizumab, 33% to infliximab, and 30% to adalimumab. Another problem is posed by the intrinsic risk of immunogenicity with biologics, with rates reported to be as high as 65.3% for infliximab and 38% for adalimumab.

Immunogenicity to one anti-TNF agent often predicts immunogenicity to other anti-TNF biologics. Some data suggest that, in patients who produced antibodies to an initial anti-TNF agent, combination therapy can provide benefit with a second anti-TNF biologic (Gut. 2020 Jul;69[7]:1206-12). However, there are some scenarios that call for monotherapy, such as when a patient can't take immunomodulators or when over-suppression could be risky. According to Dr. Aoun and colleagues, limited data and lessons from clinical practice suggest that monotherapy anti-TNF biologics with proactive therapeutic drug monitoring is a reasonable approach in these cases. Monitoring may also reduce the risk of immunogenicity.

What the authors recommended

For those reasons, if the first biologic is an anti-TNF agent, the authors recommend an immunomodulator combined with anti-TNF agents for induction or maintenance treatment of either ulcerative colitis or Crohn's disease. If immunogenicity is present after a loss of response, they recommend a second anti-TNF agent with an immunomodulator. If there is no immunogenicity and the failure is mechanistic, they recommend switching to vedolizumab monotherapy or ustekinumab monotherapy. Immunomodulators can be prescribed on an individualized basis.

When vedolizumab or ustekinumab are the patient's first biologic, they should be used as monotherapy. Both have very low rates of immunogenicity, and an immunomodulator is unlikely to confer a meaningful benefit, according to the review authors, who nonetheless called for prospective trials to explore these questions further. If there is a loss of response, they recommend anti-TNF agents combined with an immunomodulator, or monotherapy if the second agent is ustekinumab or vedolizumab.

The authors declare that they have nothing to disclose. Dr. Rubin has consulted for Janssen, AbbVie, and Takeda.

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AGA Resource
Help your patients understand biologics and biosimilars by using AGA resources for providers and patients available at gastro.org/biosimilars.

Extraesophageal symptoms of GERD

Evaluation of patients with extraesophageal symptoms of reflux is a challenging area in gastroesophageal reflux disease (GERD). Patients often present with symptoms that are not classic for reflux such as chronic cough, worsening asthma, sore throat, or globus. In the upper-GI section of the postgraduate course program, Rena Yadlapati, MD, and C. Prakash Gyawali, MD, MRCP, educated us about optimal strategies for diagnosis and treatment of this difficult group of patients. Dr. Gyawali reminded us of risk stratification of patients into those with high or low likelihood of reflux as contributing etiology for patients with suspected extraesophageal reflux. Dr. Yadlapati reviewed the utility of the HASBEER score in stratifying patients into these two risk categories. Patients with known reflux at baseline and/or if they have classic symptoms of reflux in addition to extraesophageal symptoms may be at higher likelihood of having abnormal esophageal acid exposure than those without classic heartburn and/or regurgitation. The low-risk group may then benefit from diagnostic testing off PPI therapy (either impedance/pH monitoring or wireless pH testing), whereas those in the high-risk group for reflux may undergo impedance pH testing on PPI therapy to ensure control of reflux while on therapy. Dr Yadlapati also updated the audience about lack of robust data to suggest clinical utility for oropharyngeal pH test or salivary pepsin assay testing. It was generally agreed that most patients who do not respond to aggressive acid suppressive therapy likely do not have reflux-related extraesophageal symptoms and alternative etiologies may be at play. Finally, both investigators outlined the importance of neuromodulation in those whose symptoms may be due to "irritable larynx." They emphasized tricyclics as well as gabapentin as off-label uses for patients who have normal reflux testing and continue to have chronic cough or globus sensation.


Dr. Vaezi

Michael F. Vaezi, MD, PhD, MSc, is an associate chief and a clinical director of the division of gastroenterology, hepatology, and nutrition and director of the Clinical Research and Center for Esophageal Disorders at Vanderbilt University, Nashville, Tenn. He reports consulting for Phathom, Ironwood, Diversatek, Isothrive, and Medtronic.

Genetic testing for colon cancer: Who, when, and how

During the session on colonic diseases, the case presentations provided tools to help clinicians identify and evaluate high-risk individuals. Fay Kastrinos, MD, presented a 49-year-old female who had had more than 10 cumulative adenomas and a cecal adenocarcinoma on two colonoscopies, the first of which was performed for evaluation of rectal bleeding. Carol Burke, MD, reviewed the differential diagnosis of adenomatous polyposis (defined as >10 cumulative adenomas).

Germline syndromes include familial adenomatous polyposis (FAP), MUTYH-associated polyposis (MAP), and a number of rare germline syndromes. Lynch syndrome should be considered especially for carriers of pathogenic variants in MSH6 who can present with a polyposis phenotype, as well as in children with constitutional mismatch repair deficiency syndrome. Finally, polyposis can be due to smoking, familial clustering, or previous abdominal radiation called therapy-associated polyposis. Polyposis without a known cause is referred to as colonic polyposis of unknown etiology (CPUE).


Dr. Kupfer

Dr. Kastrinos reviewed the patient's three-generation family history of a brother and mother with "polyps" and second-degree relatives with endometrial and colon cancer. Niloy Jewel Samadder, MD, presented on the role of taking a comprehensive family history, tumor tests for Lynch syndrome, selection of genetic test type, and risks, benefits, and alternatives of genetic testing. Dr. Samadder reviewed indications for germline genetic testing for colorectal neoplasia of which the patient met two criteria, namely colorectal cancer under age 50 and 10 or more cumulative adenomas.

The final section was presented by this author on multigene panel testing, in which multiple genes are sequenced simultaneously. This patient's panel showed two pathogenic variants in the MUTYH gene consistent with MAP, a recessive polyposis syndrome typically with 10-100 cumulative adenomas. The test also showed a variant of uncertain significance (VUS) which is not clinically actionable. Providers counseling patients on multigene panel testing should discuss the possibility of VUS results (especially in individuals of non-European descent), moderate penetrant genes for which management recommendations are uncertain, or unexpected findings in genes not associated with colonic neoplasia.

Dr. Kastrinos summarized key points from the session including: Hereditary colorectal cancer syndromes are not rare, red flags for inherited syndromes include early-onset colorectal neoplasia and/or numerous relatives with colorectal and other extra-colonic cancer, extended family history assessment is recommended, and genetic risk assessment and genetic testing with multigene panels is a process and should be personalized.

Sonia Kupfer, MD, AGAF, is an associate professor in the section of gastroenterology, hepatology, and nutrition at the University of Chicago. She has no financial conflicts of interest.

DDSEP 9
Digestive Diseases Self-Education Program

Quick Quiz

Q1. A 36-year-old White woman returned from a 3-month missionary trip to India and subsequently developed diarrhea and a 20-pound weight loss in the recent past. She reports increased abdominal bloating and fatigue but denies any symptoms of gastrointestinal bleeding. Her complete blood count reveals a macrocytic anemia, normal iron studies, and low vitamin B_{12} and folate levels. Her stool tests are negative for routine bacterial pathogens, giardia, ova, and parasites. Her duodenal biopsies show villous blunting.

Which of the following is true regarding this case?

A. Treatment is with a 3- to 6-month course of tetracycline and folate.
B. The patient should abstain from consuming gluten-containing foods.
C. The etiology is an infection by a protozoan organism.
D. This disease is also common in Northern Europe.
E. The condition has an autoimmune etiology.

Q2. A 54-year-old man is seen in the clinic for a recent episode of nausea, vomiting, and abdominal pain. He was vacationing with friends in Hawaii, and 1 hour after eating a local dish consisting of rice, macaroni salad, and raw tuna, he developed a headache associated with facial flushing, upper body rash, palpitations, nausea, vomiting, and abdominal pain. His friends who ate burgers did not experience any symptoms. He felt better the next day. He takes only lisinopril for hypertension and has no known drug allergies. His physical examination is unremarkable. Although he has tolerated fish in the past, he did some research on the internet and wonders if he has a seafood allergy.

Which of the following is correct regarding this case?

A. This event would have been prevented by immediate and proper refrigeration of fish after catch.
B. Ciguatera poisoning may be prevented by thoroughly cooking all fish.
C. The patient's symptoms are caused by accumulation of dinoflagellate toxins in large fish.
D. The patient's lisinopril should be discontinued.
E. The patient should undergo food allergy testing.

The answers are on page 24.

What's the best approach for dysplasia surveillance in patients with IBD?

Chromoendoscopy

Chromoendoscopy is superior in both the detection and long-term management of dysplasia in IBD when compared to high-definition white-light examination. Chromoendoscopy not only enhances dysplasia detection but further improves the definition of these lesions which then facilitates endoscopic management.

Chromoendoscopy has allowed us to increase our visual vocabulary in describing dysplasia in the setting of colitis and, thus, open the door to further innovation and perhaps adoption of artificial intelligence going forward. Our ability to classify lesions encountered in colitis mucosa has become more precise with the expanded terminology the dye-enhanced high-definition view affords, with the Frankfurt Advanced Chromoendoscopic IBD Lesion Classification being the best and most detailed example.

Dr. Marion

"Nearly one-quarter of our patients lack access to the newer equipment and, therefore, without chromoendoscopy are being surveyed outside of current guidelines."

Human beings have an innate visual perception limitation due to our inability to perceive depth in the red/green wavelength of light compared to the blue wavelength. All of the improvements in scope magnification and resolution bump up against this fact of our biology. Blue dye enhances our ability to perceive depth in this milieu and therefore detect and define flat lesions.

The superiority of chromoendoscopy when using standard-definition colonoscopes has been demonstrated repeatedly and set the stage for the 2015 SCENIC international consensus statement and a seismic shift in our endoscopic management of dysplasia in patients with colitis. This evidence base remains relevant because only 77% of colonoscopies performed in the United States are performed using high-definition equipment. Nearly one-quarter of our patients lack access to the newer equipment and, therefore, without chromoendoscopy are being surveyed outside of current guidelines.

Since the SCENIC statement multiple studies comparing chromoendoscopy with newer higher-resolution colonoscopes have been performed. The vast preponderance of evidence has shown either a trend toward superiority or the outright superiority of chromoendoscopy when compared with high-definition white-light examination in detection and long-term management of dysplasia.

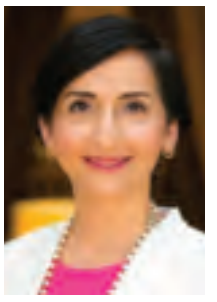
It is no accident that advanced endoscopists have universally adopted chromoendoscopy for the management of dysplastic lesions whether by mucosal resection or submucosal dissection techniques. Chromoendoscopy is recommended by all society guidelines because of these inherent advantages.

Is high-definition white-light "good enough" for surveilling our patients with colitis? The overall incidence of colorectal cancer in IBD has been declining which makes each colonoscopy count more. We are performing up to 88 colonoscopies in patients with colitis to find a single cancer (compared to 8 in non-IBD surveillance patients). We need to be performing fewer and more precise chromoendoscopic examinations. We are otherwise failing to serve our IBD patients by performing too many negative procedures at too high a cost. Our patients deserve more than merely "good enough."

James F. Marion, MD, is professor of medicine at the Icahn School of Medicine at Mount Sinai and director of education and outreach at The Susan and Leonard Feinstein Inflammatory Bowel Disease Center of The Mount Sinai Hospital, both in New York. He is on the advisory board for Janssen.

High-definition white-light endoscopy

Longstanding ulcerative colitis and Crohn's colitis increase the risk for developing colorectal cancer. The majority of neoplastic lesions are visible endoscopically, and therefore, dye spraying chromoendoscopy (DCE) may not be necessary for all inflammatory bowel disease (IBD) patients undergoing a routine dysplasia surveillance colonoscopy. High-definition white-light (HDWL) endoscopes have higher magnification capacities and pixel density than the standard-definition (SD) systems and provide sharper images with fewer artifacts. Although DCE has been proven to be superior to SD, there have been no differences in detection of dysplasia for routine surveillance with use of HDWL compared to DCE.



Dr. Afzali

"The SCENIC guidelines' key recommendation for optimizing detection and management of dysplasia in IBD is to use an HD colonoscope."

The SCENIC guidelines' key recommendation for optimizing detection and management of dysplasia in IBD is to use an HD colonoscope. Further, based on the recent ACG Practice Guidelines for Dysplasia Screening and Surveillance in 2019, HD colonoscopes are also recommended.

In a network meta-analysis of eight parallel-group randomized controlled trials (RCT), there was very low quality of evidence to support the use of DCE over HDWL. This was contrary to prior, non-RCT studies which suggested that both SD and HDWL were inferior to DCE. More recently, Iacucci and colleagues conducted a randomized noninferiority trial to determine detection rates of neoplastic lesions in IBD patients with longstanding colitis who had inactive disease and enrolled in HDWL, DCE, or virtual chromoendoscopy (VCE) groups. The conclusion was that VCE and HDWL was not inferior to DCE, and HDWL was sufficient in detection of all neoplastic lesions including dysplasia and adenocarcinoma. In another large multicenter, prospective RCT of nine tertiary hospitals in South Korea, the detection rates of colitis-associated dysplasia or all colorectal neoplasia were comparable in HDWL versus high-definition chromoendoscopy. Lastly, a meta-analysis of six RCTs concluded that, although DCE is superior to SD in identification of dysplasia, there was no benefit of DCE compared to HDWL.

In summary, HDWL colonoscopy should be the standard of care for routine dysplasia surveillance in IBD. DCE should be considered in patients who are found to have a dysplastic lesion by HDWL in order to better delineate the lesion margins, endoscopically resect or remove, and for future dysplasia surveillance colonoscopies in the higher-risk IBD patient. Overall, a close and careful examination of the entire colon with use of HDWL is sufficient in detection of dysplasia and for routine surveillance in IBD patients.

Anita Afzali, MD, MPH, AGAF, is medical director of the Inflammatory Bowel Disease Center and program director of the Advanced Inflammatory Bowel Disease Fellowship at Ohio State University in Hilliard. She has no relevant conflicts of interest.

‘Unified’ NASH response needed

Coordinated *from page 1*

ter-focused and better-coordinated care for patients at risk for developing or having NAFLD or NASH, particularly among “emerging” at-risk cohorts such as patients with diabetes and obesity (Gastroenterology. 2021 Jul 26. doi: 10.1053/j.gastro.2021.04.074).

The statement’s central pitch is that improvements in care won’t be possible unless the several medical specialties that deal with affected or at-risk patients stop working “in separate silos,” and instead create “a collective action plan,” and also organize multidisciplinary teams that “integrate primary care, hepatology, obesity medicine, endocrinology, and diabetology via well-defined care pathways.”

“The overarching goal” is a “unified, international public health response to NAFLD and NASH,” said the statement, which stemmed from a conference held in July 2020 that included representatives from not only the lead gastroenterology group but also the American Diabetes Association, the American Association for the Study of Liver Diseases, the American Association of Clinical Endocrinologists, The Endocrine Society, The American Academy of Family Physicians, The Obesity Society, and the American College of Osteopathic Family Physicians.

The statement cites sobering prevalence numbers, with estimates that NAFLD exists in more than half the patients with type 2 diabetes, while NASH affects about a third, rates that translate into many millions of affected Americans, given recent estimates that the U.S. prevalence of type 2 diabetes exceeds 30 million people. And the numbers continue to rise along with increases in the prevalence of obesity and type 2 diabetes.

“It’s an enormously common disease, and there are not enough gastroenterologists, to say nothing of hepatologists, to care for every patient with NAFLD,” said Anna Mae Diehl, MD, a gastroenterologist and professor at Duke University in Durham, N.C., who was not involved with the conference nor in writing the statement.

Another key part of this initiative is development of clinical care pathways that will have “careful explication of each step in screening, diagnosis, and treatment,” and will be designed to inform the practice of primary care physicians (PCPs) as well as clinicians from the various specialties that deal with these patients.

Dr. Kanwal

The clinical care pathways are on track to come out later in 2021, said Fasiha Kanwal, MD, AGAF, a professor and chief of gastroenterology at Baylor College of Medicine in Houston, and lead author on the Call to Action document.

The new document includes results from a recent survey about NAFLD and NASH management completed by 751 U.S. physicians, including 401 (53%) PCPs, 175 gastroenterologists, (23%) and 175 endocrinologists (23%; percentages total 99% because of rounding).

The results showed “significant gaps in knowledge about whom to screen and how to diagnose and treat patients at high risk for NASH,” concluded the statement’s authors. Barely more than a third of the respondents knew that almost all patients with severe obesity likely have NAFLD, and fewer than half the endocrinologists and the primary care physicians appreciated that NAFLD is very common among

Continued on following page

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patients with type 2 diabetes. "I applaud this effort that calls attention to an emerging public health problem. This paper and survey are great ideas. The findings are not surprising, but they're important," Dr. Diehl said in an interview. "Much more needs to be done" including changes in social behavior and government policies.

"The public's understanding of NAFLD is not there," and many physicians also have an incomplete understanding of NAFLD and more serious stages of metabolic liver disease. "Physicians know that patients with obesity are at risk for heart disease, diabetes, and stroke, but they may not always be aware that these patients can also have cirrhosis," noted Dr. Diehl, who published in 2019 a call to action for NAFLD of her own with some associates (Nat Metab. 2019 Nov;1:1027-9).

"My referrals are fueled by primary care physicians who recognize patients with significant liver disease. It would be great to outline recommended practice; I have no doubt that providers will embrace this," as well as the broader concept of multidisciplinary teams, another focus of the statement. Dr. Diehl cited the "Cancer Center model," where an oncologist takes primary responsibility for caring for a cancer patient while coordinating care with other specialists, an approach facilitated by EMRs that allow seamless data and chart sharing and something that many health systems have either already adopted or are moving toward.

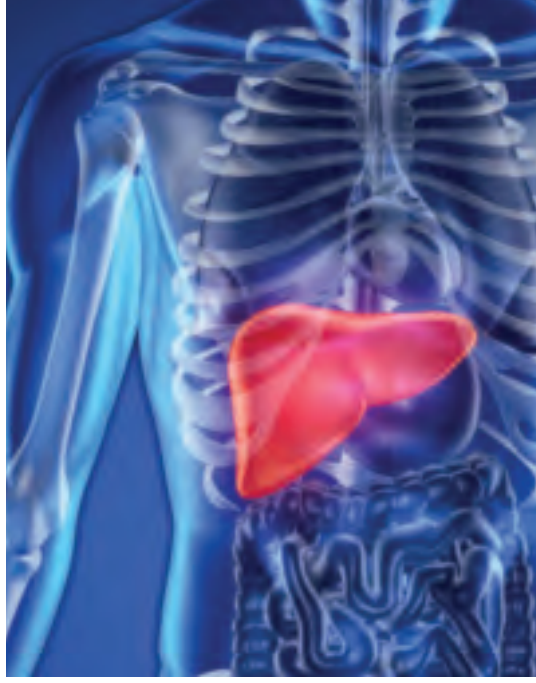
Dr. DeFronzo

She said the NASH Call to Action may help catalyze broader application of this model to many more patients with NAFLD or NASH, and noted that some U.S. centers already use this approach – including Dr. Diehl's program at Duke – which brings together her gastroenterology colleagues with cardiologists, radiologists, endocrinologists, and bariatric surgeons. But she noted that, for most patients with metabolic liver disease, the hub clinician needs to be a PCP, especially for patients with earlier-stage disease, because the number of affected patients is so huge.

"Key steps toward establishing such teams include establishing protocols for risk stratification and referral, definition of roles and responsibilities, and buy-in from institutions and payers. Clearly a lot of work needs to occur to get to these multidisciplinary teams," said Dr. Kanwal.

Ralph A. DeFronzo, MD, professor and deputy director of the Texas Diabetes Institute at UT Health San Antonio, who was not involved with the conference or statement, had a different take on what the future of NASH and NAFLD care may look like.

"Endocrinologists, hepatologists, and obesity experts will work within their individual specialties to diagnose and manage NASH," he said in an interview. But he acknowledged that "an integrated effort by specialists would be important" to help "primary care physicians who are less familiar with the disease."



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Dr. Diehl and Dr. Kanwal had no relevant disclosures. Dr. DeFronzo has been a speaker on behalf of AstraZeneca and Novo Nordisk, has been an adviser to AstraZeneca, Boehringer Ingelheim, Intarcia, and Janssen, and has received research funding from AstraZeneca, Janssen and Merck.

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WTC early responders have higher prevalence of liver disease

BY BRANDON MAY

MDedge News

Emergency responders to the World Trade Center (WTC) attack in 2001 paid a significant physical cost for their service in the form of exposure to chemicals, dust, and airborne particulates causally linked to hepatotoxicity. As we neared the 20th anniversary of these attacks, researchers have determined that those responders who arrived at the WTC site earlier have a significantly higher prevalence of hepatic steatosis compared with those who arrived in the days that followed.

"This research is some of the first to suggest that there may be a link between the amount of exposure experienced by responders to the WTC site and the higher likelihood of excessive accumulation of fat in their livers," study author Artit Jirapatnakul, PhD, of Icahn School of Medicine at Mount Sinai, New York, said in an interview. These findings were published in the American Journal of Industrial Medicine (2021 Jul 30. doi: 10.1002/ajim.23269).

More than 20,000 men and women who responded to the WTC site on Sept. 11, 2001, were exposed to particulate matter and chemicals known to cause liver damage and increase the risk of toxicant-associated fatty liver disease. These responders have been offered screening and treatment of different conditions associated with the attack, including CT lung cancer screening for those meeting age and smoking status criteria.

To investigate the dose-response association between WTC site exposure intensity and the risk of hepatic steatosis, Dr. Jirapatnakul and colleagues reviewed low-dose CT chest scans of all participants in the WTC General Responders Cohort (GRC) who had available laboratory data within a 12-month period from their first scan following the Sept. 11, 2001, attack. Only CT chest scans performed between Sept. 11, 2001, and Dec. 31, 2018, were collected and reviewed in the study. A total of 1,788 WTC responders were included (83.7% were male; mean age at time of attack, 42.5 years).

Dr. Jirapatnakul

The investigators stratified dust exposure into five groups according to when the responders arrived at the WTC site: Sept. 11, 2001, in the dust cloud; Sept. 11, no dust cloud (same-day arrival); Sept. 12 or 13 (second- and third-day arrival); Sept. 14 to the end of September (fourth-day arrival); and October and beyond.

The median duration between Sept. 11, 2001, and the earliest available CT scan was 11.3 years. Liver density was measured via Statistics-based Liver Density Estimation from Imaging (2020 Jan. doi: 10.1016/j.ejrad.2019.108723), a previously validated algorithm, with a slice thickness of 1.25 mm or below.

There was a statistically significant trend of increasing liver steatosis with earlier times of arrival (P <.0001). The WTC arrival time retained its status as a significant independent factor for decreased liver attenuation in an analysis adjusted for sex, age, race, smoking status, alcohol use, body mass index, diabetes, gastroesophageal reflux disease, and forced expiratory volume in 1 second.

Dr. Jirapatnakul said that the next step will be to determine whether WTC responders with excessive liver fat also have increased liver scarring. In addition, he and his colleagues are working to establish a registry to collect information on the impact of liver disease as it relates to quality of life in members of the WTC GRC.

Another direction of future research will be to differentiate between those with only hepatic steatosis, those with inflammation from hepatic steatosis (steatohepatitis), and those with hepatic fibrosis which is the most concerning outcome from fatty liver diseases, according to Albert Do, MD, clinical director of the fatty liver disease program at Yale University, New Haven, Conn. He noted that additional research will also need to identify the specific exposure that may be causing hepatic steatosis in early WTC responders. "Currently, only a small number of medications are known to cause this," he explained, "and thus such knowledge will help us further understand occupational exposures and their associated risks."

The researchers received study funding from the National Institute for Occupational Safety and Health. They disclosed conflicts of interest with Genentech, AstraZeneca, Pfizer, Bayer Healthcare, Gilead Sciences, and Boehringer Ingelheim.

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Commentary

COVID-19: Answering the key questions

BY WILLIAM F. BALISTRERI, MD

For those of us treating patients with liver disease throughout the pandemic, we have anticipated evidence-based guidance regarding the contribution of specific liver disease phenotypes and immune suppression/transplantation on COVID-19 susceptibility and outcome. Now, data are emerging to help answer some of the major questions surrounding COVID-19 and the liver.

Does the virus itself cause liver disease?

The answer to this question is still a bit unclear. Multiple early reports[1-11] stated that hospitalized patients with SARS-CoV-2 infection frequently had elevated values on liver biochemistry tests. For example, the reported incidence of elevated serum aspartate aminotransferase or alanine aminotransferase levels ranged from 14% to 83%, yet the magnitude of enzyme elevation was generally reported to be mild and normalized as COVID-19 symptoms improved.

Dr. Balistreri

Unsurprisingly, patients with severe liver injury (defined as AST and ALT levels more than five times the upper limit of normal) were more likely to have a complicated clinical course, including having elevated inflammatory markers and requiring intensive care unit admission, renal replacement therapy, and/or intubation. Currier and colleagues reported that patients with COVID-19 who had elevated AST and ALT levels had significantly higher odds of these same adverse outcomes and death.

This reflects the multifactorial pathogenesis of enzyme elevation, including a direct injurious effect of the virus on hepatocytes, cytokine or immune-mediated liver damage, drug hepatoxicity, or hypoxia and systemic inflammation.

Pellegrini and colleagues reported that 7% of patients infected with SARS-CoV-2 developed acute liver failure during their hospitalization, with a resulting mortality rate of 74%. Wagner and colleagues suggested that the pattern of peak elevated enzyme elevation was prognostic of severe clinical outcomes in hospitalized patients with COVID-19. Patients with a predominantly mixed pattern (AST/ALT and alkaline phosphatase elevations) had worse outcomes than those with a hepatocellular phenotype (isolated AST and/or ALT elevation).

Severe liver injury associated with SARS-CoV-2 infection is uncommon in children. However, elevated AST and ALT levels may be seen in association with multisystem inflammatory syndrome.[12-15]

Are patients with preexisting chronic liver disease more susceptible to adverse outcomes?

Early observations suggested that patients with chronic liver disease, such as cirrhosis, who acquire SARS-CoV-2 have high rates of hospitalization and mortality. However, it is unclear whether all such patients are affected or whether certain subgroups are at higher risk.

In results that they hoped would allow for better risk stratification and personalization of care, Kim and colleagues reported that patients with alcohol-related liver disease, decompensated cirrhosis, and hepatocellular carcinoma have the highest risk for all-cause mortality from COVID-19. Separate presentations at Digestive Disease Week 2021 confirmed that patients with preexisting liver disease had a threefold higher rate of mortality, thromboembolism, acute respiratory distress syndrome, and a severe COVID-19 disease course, and that patients with both COVID-19 and cirrhosis had significantly higher rates of mortality (18% vs. 13%), ICU admission (46% vs. 34%), and longer lengths of stay than those without cirrhosis.

Nonalcoholic fatty liver disease (NAFLD) is currently the most common chronic liver disease, and

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its impact on the course of SARS-CoV-2 infection (and vice versa) is controversial. However, metabolic risk factors, such as obesity, diabetes mellitus, and hypertension, are known to be associated with severe illness from COVID-19. It was also reported that hepatic steatosis was associated with worse outcomes in patients with liver injury and SARS-CoV-2 infection, and that a higher proportion of patients with NAFLD required mechanical ventilation during their hospital course (47% vs. 17%) and had increased mortality (41% vs. 17%).

Do immunosuppressed patients face unique risks from infection?

Data from a limited case series, patient registries, and multicenter international studies have indicated that the clinical outcome of SARS-CoV-2 infection in adults with autoimmune hepatitis (AIH) was comparable to that noted in nonimmunosuppressed persons. However, it has also been suggested that a more complicated relationship exists between this virus and autoimmunity because immunosuppression may actually protect against the inappropriate immune response, or cytokine storm, engendered during severe SARS-CoV-2 infection.

The complexity of this relationship is further illustrated by a report from Bril and colleagues that described a case of AIH that developed after a patient had received a COVID-19 vaccine. The authors were careful to state that a causal relationship between receipt of the vaccine and the onset of AIH cannot be proven.

What's the impact on liver transplant recipients?

Findings are limited regarding clinical outcomes and disease severity of SARS-CoV-2 infection in liver transplant recipients, but initial reports raised concern for high rates of adverse outcomes.[16-25]

Tien and colleagues reported an increased risk for COVID-related death among liver transplant recipients. Separate international multicenter studies published in 2020 and 2021 found that liver transplant patients with COVID-19 had a significantly higher risk for hospitalization but no higher risk for mortality, thrombosis, or ICU requirement, compared with patients with COVID-19 who had not undergone liver transplantation. Increased age and the presence of comorbidities were determinants of the severity of SARS-CoV-2 infection and of mortality among liver transplant recipients.

Clearly, more data are needed to address the influence of liver transplantation in patients with COVID-19; however, some risk/protective factors have been cited. For example, Belli and colleagues reported that the use of tacrolimus was associated with a better outcome. Conversely, baseline immunosuppression containing mycophenolate mofetil was an independent predictor of severe COVID-19 in liver transplant recipients.

Do COVID-19 vaccines work differently in patients with liver disease?

Unfortunately, we haven't been able to address many of our patients' questions related to vaccine efficacy, safety, and durability. Data are limited because immunocompromised patients were excluded from the phase 3 trials of the COVID-19 vaccines.

We also need greater clarity on the robustness of the response to these vaccines in liver transplant recipients. Rabinowich and colleagues evaluated humoral antibody responses after vaccination with the mRNA-based vaccine BNT162b2 (BioNTech/Pfizer) and confirmed lower immunogenicity in liver transplant recipients. Antibodies were detectable in only 48% of patients, compared with 100% of healthy controls; in addition, antibody titers were significantly lower. Unfortunately, there are no data on the correlation of protection from SARS-CoV-2 with antibody titers.

Additional data will be required to assess vaccine effectiveness in protecting against severe COVID-19 as well as to determine the magnitude of humoral vaccine responses in recipients treated with high-dose steroids and mycophenolate mofetil. In addition, we eagerly await studies that determine whether booster doses are required.

What's the bottom line?

In the face of the COVID-19 pandemic, our understanding of the impact on our patients remains a work in progress.

As we await more clarity, there are a few practical points of clinical relevance we take away from the literature, the recently released joint Statement on COVID-19 Vaccination in Solid Organ Transplant Recipients, and the American Association for the Study of Liver Diseases (AASLD) consensus statement. These suggest clinicians take the following steps:

- In the assessment of patients with SARS-CoV-2 infection and elevated AST and ALT levels, the first objective is to rule out etiologies unrelated to COVID-19, specifically other viruses and drug-induced injury, as well as nonhepatic causes (e.g., myositis, cardiac injury, ischemia).
- Reduction in immunosuppression in SARS-CoV-2–infected patients with AIH should be considered carefully and generally undertaken only in those with severe illness.
- Pretransplant SARS-CoV-2 vaccination is recommended for all liver transplant candidates and liver transplant recipients as well as their household members and caregivers, to reduce exposure for these patients, along with continued adherence to protective measures (masking and social distancing).
- Continuation of a stable post-transplant immunosuppression

DDSEP 9
Digestive Diseases Self-Education Program

Quick Quiz answers

Q1. Correct answer: A. Treatment is with a 3- to 6-month course of tetracycline and folate.

Rationale

Tropical sprue occurs in patients from or travelers to endemic areas near the equator, such as Puerto Rico, Haiti, Cuba, Southeast Asia, and India for at least 2 weeks to a month and has a likely infectious etiology, but the exact organism(s) has not been identified. Patients may present with malabsorption, steatorrhea, weight loss, and fatigue.

Laboratory testing shows anemia, B_{12} and folate deficiency, and increased fecal fat. Biopsies of the small bowel during upper endoscopy show villous blunting with negative celiac serologies.

Treatment is a 3- to 6-month course of tetracycline 250 mg orally four times daily with folate 5 mg orally daily.

The macrocytic anemia, normal iron studies, and low vitamin B_{12} and folate levels argue against celiac disease, so this patient is unlikely to respond to a gluten-free diet.

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Q2. Correct answer: A. This event would have been prevented by immediate and proper refrigeration of fish after catch.

Rationale

This patient has scromboid poisoning, which occurs when histidine is converted to histamine by bacterial enzymes in improperly refrigerated fish. Most cases in the United States are reported in Hawaii, Florida, and California and involve consumption of affected tuna, mackerel, mahi-mahi, sardines, herring, and other fish. Onset of symptoms occurs about 1 hour after eating the suspect fish; the patient may experience hot flashes, facial flushing, hives, upper body rash, perioral paresthesias or edema, palpitations, lightheadedness, nausea, vomiting, and abdominal pain. Symptoms typically resolve within 1 day, though some patients may experience a longer course. Supportive care and either oral or intravenous administration of antihistamines may be used to improve symptoms. Evaluation of airway patency is also important. Scromboid poisoning may be prevented by immediate refrigeration of fresh fish to below 40°C.

Although ACE inhibitor–induced angioedema may cause facial swelling, the time course of the disease and associated risk factors favor scromboid poisoning. Ingestion of *Bacillus cereus* or *Staphylococcus aureus* would not be expected to cause flushing, tachycardia, and upper body rash. Ciguatera poisoning has a less immediate onset of symptoms, is associated with neurologic symptoms, and has a more protracted course. This patient is not likely to have an allergy to seafood.

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regimen at the time of vaccination is recommended to avoid the risk for organ rejection until more comprehensive data are available.

For updated responses to the evolving guidelines, visit the AASLD's resource center.

William F. Balistreri, MD, is the Dorothy M.M. Kersten Professor of Pediatrics; director emeritus, pediatric liver care center; medical director emeritus, liver transplantation; and professor, University of Cincinnati College of Medicine, department of pediatrics, Cincinnati Children's Hospital Medical Center. He has served as director of the division of gastroenterology, hepatology, and nutrition at Cincinnati Children's for 25 years and frequently covers gastroenterology, liver, and nutrition-related topics for this news organization. Dr. Balistreri is currently editor-in-chief of the Journal of Pediatrics, having previously served as editor-in-chief of several journals and textbooks. He also became the first pediatrician to act as president of the American Association for the Study of Liver Diseases. He has disclosed no relevant financial relationships.

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Repeat gastroscopy still detects malignant ulcers

BY BRANDON MAY
MDedge News

Most malignancies with new ulcer were identified on initial gastroscopy in a retrospective cohort study, but it's still worth performing follow-up procedures, according to investigators.

"Although the additional yield of malignancy at follow-up gastroscopy is low at 2%, our data supports the current strategy of repeat endoscopic assessment given variables in obtaining adequate ulcer histology and the lack of reliable endoscopic predictors of a malignant ulcer," Linda Yang, MBBS, of the University of Melbourne, and colleagues wrote in the Journal of Clinical Gastroenterology (2021. doi: 10.1097/MCG.0000000000001595).

Despite recommendations, there is a lack of consensus regarding timing of repeat gastroscopy, and no established ulcer biopsy protocols exist. Additionally, there is a lack of data on real-world repeat gastroscopy practices and follow-up outcomes. To understand the current practice in gastric ulcer follow-up, Dr. Yang and researchers retrospectively examined new gastric ulcers diagnosed on gastroscopy between 2013 and 2017 at two separate Australian institutions.

Out of 795 patients (median age, 69 years; 59% male), approximately 55% (n = 440) underwent repeat gastroscopy at a median of 8 weeks later. Overall, 52 patients (7%) received a malignancy diagnosis, with 83% (n = 43) of these diagnoses detected at the index gastroscopy; 2% overall received the diagnosis based on follow-up gastroscopy.

"I think these numbers would support the assumptions of most endoscopists that a small but still significant portion of new gastric ulcers will turn out to be malignant," explained Michael DeSimone, MD, gastroenterologist at Emerson Hospital in Concord, Mass., who wasn't involved in the study.

In the study, a multivariate analysis revealed several predictors of benign ulcers, including lack of endoscopic suspicion at the index gastroscopy (odds ratio, 0.1; 95% confidence interval, 0.03-0.13; $P \leq .005$), complete healing on repeat gastroscopy (OR, 0.5; 95% CI, 0.34-0.70; $P = .036$), and benign histology on initial biopsy (OR, 0.12; 95% CI, 0.43-0.90; $P \leq .005$). However, no patient-related factors – such as *Helicobacter pylori* status and ethnicity – were associated with an increased likelihood of malignancy.

"Knowing that low suspicion for malignancy on initial exam and benign histology on initial biopsies predict benign ulcers ... reasonable endoscopists could feel more comfortable not repeating an exam where procedure safety is a significant concern if their suspicion was low on the index exam," said Dr. DeSimone.

A primary limitation of the study included its retrospective nature; however, the authors pointed out that the study currently represents the largest multicenter, retrospective cohort analysis of endoscopic follow-up for gastric ulcers. Knowing high-risk factors could lead to reductions in health care cost and patient burden, the authors concluded.

Some of the study authors received funding from the National Health and Medical Research Council of Australia, but the remaining authors had no disclosures. Dr. DeSimone reported having no relevant conflicts.

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AGA Rapid Review and Guideline Update

Pre-endoscopy SARS-CoV-2 testing post vaccination

BY WILL PASS
MDedge News

The American Gastroenterological Association recently updated their guideline for preendoscopy SARS-CoV-2 testing in light of populationwide vaccination programs, now recommending against routine viral screening regardless of patient vaccination status and local disease prevalence.

Centers electing to maintain a preprocedure testing strategy should use standard nucleic acid testing, preferably rapid reverse transcription polymerase chain reaction (RT-PCR) because this can be performed on the day of the procedure, thereby limiting patient testing burden, reported authors led by co–first authors Shahnaz Sultan, MD, AGAF, of the University of Minnesota, Minneapolis, and Minneapolis Veterans Affairs Healthcare System, and Shazia M. Siddique, MD, of the University of Pennsylvania, Philadelphia.


Dr. Sultan

These new recommendations, both of which are conditional and based on very-low-certainty evidence, were drawn from a rapid evidence review of benefits and risks in the postvaccination period.

"Since the start of the pandemic, our increased understanding of transmission has facilitated the implementation of practices to promote patient and health care worker (HCW) safety," the guideline authors wrote in Gastroenterology (2021 May 21. doi: 10.1053/j.gastro.2021.05.039). "Simultaneously, there has been increasing recognition of the potential harm associated with delays in patient care, as well as inefficiency of endoscopy units. With widespread vaccination of HCWs and the general population, a reevaluation of AGA's prior recommendations was warranted."

The 2020 AGA guideline (Gastroenterology. 2020 Jul 27. doi: 10.1053/j.gastro.2020.07.043), also led by Dr. Sultan, issued viral screening recommendations based on local prevalence rates of asymptomatic COVID-19, with pretesting reserved for moderately affected locations. Mildly affected areas were advised against pretesting, whereas centers in pandemic hot spots were cautioned against performing all but "emergency or time-sensitive procedures."

Those recommendations have now been replaced by the present guideline, which no longer distinguishes between local prevalence rates. This decision was based on a variety of factors, the panelists noted, including endoscopy volumes, endoscopy-related risk of infection, prevalence of asymptomatic COVID-19 among patients undergoing endoscopy, and the impact of delaying care on cancer burden.

"The panel placed a high value on minimizing additional delays in patient care, acknowledging the reduced endoscopy volumes, downstream impact on delayed cancer diagnoses, and burden of testing on patients," Dr. Sultan and colleagues wrote.

The guideline includes a summary of evidence related to the two new recommendations, including several studies reporting prevalence of asymptomatic SARS-CoV-2 infection among patients tested prior to endoscopy procedures.

"Across 13 studies, asymptomatic prevalence ranged from 0% to 1.5%, but most studies reported a range from 0% to 0.5%," the panelists wrote, "regardless of local surges of COVID-19 cases."

Although Dr. Sultan and colleagues acknowledged that pretesting may be reassuring, they noted that, based on available evidence, "there were few to no cases of infections reported among HCWs (performing endoscopy) and patients. Among the few reported cases, the authors could not clearly distinguish between community-acquired infections or health care–acquired infections."

They went on to quantify the relationship between delays in care and cancer burden, reviewing data from 14 studies that demonstrated an overall reduction in endoscopy-detected colorectal cancers by 31%-71%, esophageal cancers by 27%-37%, and gastric cancer by 27%-52% since the start of the pandemic. A recent study by Ahmad Khan, MD, and colleagues, which focused on the United States from July to November 2020, demonstrated an 11.74% decrease in diagnoses of malignant colorectal cancer, and a 19.78% decline in diagnoses of esophageal and gastric cancer (Gastroenterology. 2021 Jun. doi: 10.1053/j.gastro.2021.02.055).

The second recommendation – calling for standard nucleic acid testing among centers electing to maintain a pretesting strategy – was also presented with a summary of supporting evidence, largely pertaining to test accuracy.

"Rapid RT-PCR tests that can be easily performed on the day of endoscopy (results within 1 hour) are preferable as they pose less burden to patients," the panelists wrote. "In the preprocedure setting, the utility of rapid isothermal tests or antigen tests is limited due to concerns of assay sensitivity. There is no role of antibody tests for preprocedure testing."

For both new recommendations, it is assumed that "all centers have access to PPE, including face shield, eye protection, and surgical mask or N95 (or N99, powered air-purifying respirators)" and that "all centers have implemented universal screening of patients for COVID-19 symptoms, using a screening checklist, and have implemented universal precautions, including physical distancing, masks, and hand hygiene in the endoscopy unit."

As COVID-19 cases rise in the United States because of the Delta variant, there is renewed concern about infection and transmission of SARS-CoV-2 during endoscopy. Stay tuned for updates and visit https://gastro.org/practice-guidance/practice-updates/covid-19/.

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