Understanding Early Age Onset

Colorectal Cancer

In March, the Colon Cancer Challenge Foundation hosted the second annual Early Age Onset Colorectal Cancer Summit. The program brought together cancer survivors, healthcare professionals and researchers from across the country to learn about and discuss the rapidly increasing incidence of rectal and colon cancer among young adults under 50 years of age in the U.S. and abroad.

Following the event, *EndoEconomics* interviewed three physicians involved in the event about early age onset (EAO) colorectal cancer (CRC). They are as follows (listed in alphabetical order by last name):

DENNIS AHNEN, MD, AGAF, FACG

Dr. Ahnen *is a co-chair of the National Colorectal Cancer Roundtable (NCCRT) Family History and Early Onset Colorectal Cancer Task Group. He is a professor of medicine at the University of Colorado School of Medicine as well as the clinical lead of the Genetics Clinic at Gastroenterology of the Rockies.*

PAUL C. SCHROY III, MD, MPH

Dr. Schroy *is a co-chair of the NCCRT Family History and Early Onset Colorectal Cancer Task Group. He is a professor of medicine at the Boston University School of Medicine and director of clinical research of the GI section at Boston Medical Center.*

THOMAS WEBER, MD, FACS

Dr. Weber *was course director and host of the Summit. He is a co-chair of the NCCRT Family History and Early Onset Colorectal Cancer Task Group. He is a professor of surgery at the State University of New York Health Sciences Center as well as the president and founder of the Colon Cancer Challenge Foundation.*

Q: What is the significance of the rapid rise in EOA CRC?

Dr. Paul Schroy (PS): Historically, we have known that most patients who develop CRC are over the age of 50. Consequently, screening rates among this age group have markedly increased during the past decade due to both increased patient and provider awareness. This increase in screening has resulted in a 30% decrease in CRC incidence and a significant decrease in CRC mortality.

More recently, however, we have seen an alarming rise of CRC in individuals under the age of 50 who really are not candidates for screening in the absence of known familial or genetic risk factors. This is a group that's harder to identify at a pre-symptomatic state, which makes it more difficult to either prevent or detect cancer early enough to optimize the likelihood of a good outcome.

Dr. Dennis Ahnen (DA): The success story of the steady decrease in both the incidence and mortality of CRC in the United States doesn't apply to people under the age of 50. They are the only demographic where the incidence and mortality from CRC is increasing rather than decreasing. It's a stark contrast to the success we have had in reducing incidence in older individuals.

With about 140,000 of new CRCs in the United States each year, EAO represents a bit more than 10% of CRC. EAO CRC incidence is approaching 15,000 people a year; that's more than cervical cancer incidence and close to esophageal and gastric cancer incidence in the United States. If you just consider the EAO CRC group alone, it's worth paying attention to and trying to figure out what causes it and what we can do to prevent it.

Dr. Thomas Weber (TW): It certainly underscores that consumers as well as healthcare providers really do need to be more aware of these trends because the vast majority of these people are not likely to be screened. It is sometimes difficult for both patients and providers to appreciate that a young person presenting with symptoms and signs may have a malignancy.

It's also important to acknowledge that when you are looking at a population under 50, these are young people in the prime of life; people who are looking to partner and have families. This issue of an increasing incidence of EAO CRC raises a lot of concerns about optimal treatment, aggressiveness of those treatments and how it's going to impact future quality of life, including fertility.

Q: What challenges do providers face in identifying EAO CRC?

TW: One of the biggest challenges is that providers may not think of cancer as the cause for presenting symptoms because the patient is so young. In addition, the evidence we have so far suggests that the majority of these patients do not have known risk factors in their history. Specifically, they may not have a family history of the disease.

Separately, there are the issues of interpreting their presenting symptoms. People may present with vague symptoms, such as abdominal pain, which is difficult to interpret as it is a very common problem. But when young people, like any other patient, present with rectal bleeding, this is a significant and serious symptom that needs to be addressed.

PS: It's currently difficult to identify most individuals under the age of 50 who might potentially benefit from early screening or surveillance. The fact is we don't have a handle on risk factors for many of these EAO cancers short of those that occur in the setting of a positive family history of CRC. Hence, the most reliable method at present relies on taking an accurate family history beginning before age 20 in hopes of identifying those at the highest risk due to a genetic predisposition.

One of the other challenges is risk stratifying patients with recurrent rectal bleeding under the age of 50. As Dr. Weber noted, this should be a red flag. Oftentimes, a younger patient may have some of the other GI symptoms that can be associated with CRC, but because these symptoms are relatively common, such as abdominal pain or a change in bowel habits, they are often attributed to conditions like irritable bowel syndrome (IBS) and thus not viewed the same way as someone who is over 50 with similar symptoms.

DA: The most common challenge is recognizing that CRC is in the differential of GI symptoms of the young, particularly rectal bleeding and recent onset persistent abdominal pain, as opposed to longstanding intermittent pain you may see in IBS.

To echo what has been stated, rectal bleeding shouldn't be ignored and attributed to hemorrhoids without an examination. I think the single most common error made that leads to a delay in the diagnosis of EAO CRC is attributing rectal bleeding to hemorrhoids or some other benign source without endoscopic confirmation of the source.

The delay in diagnosing and recognizing the symptoms that can occur from EAO cancer and including cancer in the differential diagnosis of lower GI symptoms in young adults are important challenges providers must recognize.

Q: What challenges do patients face in identifying they are at higher risk of EAO CRC?

DA: They generally parallel the providers' challenges. Young people need to not ignore symptoms themselves. Studies that have looked at what specific factors contributed to delayed diagnosis of EAO CRC found that about half of the delay is on the provider side, about half is due to delays on the patient side in reporting symptoms to their providers.

Young people should not attribute rectal bleeding to hemorrhoids without an evaluation to determine the source. Similarly, persistent or progressive symptoms such as recent onset abdominal pain or a change in bowel pattern (constipation or diarrhea) should be evaluated as they can be caused by CRC in the young.

TW: Another major challenge is patients and families being aware of their cancer family history in general, specifically CRC. Up to 15% of Americans have a first-degree relative with CRC. That means these people are at increased risk, and should be on more diligent screening and surveillance protocols. But people will not know if they are not aware.

In my mind, the primary responsibility is for the providers to take family histories. We need to be training them to take family histories. We know from the published literature that this is often not the case.

Also, for people who have inflammatory bowel disease, they are certainly at increased risk, and should be receiving council from providers that they need increased surveillance.

PS: Patients need to be resolute in trying to encourage their doctors not to dismiss symptoms. The plight of many of these younger individuals is they keep getting written off for having hemorrhoids as the cause of bleeding or IBS as the cause of their abdominal pain or change in bowel habits. Patients need to speak with the providers when symptoms persist or, in the case of rectal bleeding, when no further workup is ordered.

It is difficult to know when patients should push hard on their providers about conducting more diagnostic testing. There's a tension concerning over-testing of a group that has not been historically at high risk of CRC.

Q: What are some short- and long-term strategies to build awareness of, identify and treat EAO CRC?

DA: As noted by Dr. Weber, family history is critically important in risk assessment for CRC. So for providers, one of the first things they should do is develop a tool or system within their practice that ensures they routinely obtain the relevant family history needed to care for the patient. In the case of CRC prevention, that includes the family history of cancers. You need to have some way of doing that routinely and updating it regularly, preferably by the patient.

In the short term, it's important to have educational efforts that reinforce the concept that providers should talk about CRC screening and cancer family history with their patients well before the age of 50. We've done so well and put so much effort into average risk screening that there is sometimes a link in our minds that colon cancer screening starts for everyone at age 50. But we really need to talk about colon cancer screening before that age, otherwise we'll miss important groups, such as those with a family history of CRC who should start screening earlier.

PS: The NCCRT Family History Task Group is developing tools that can be built into EMRs to prompt providers to ask the right questions about family history, facilitate accurate documentation and receive real-time information to guide appropriate patient management.

The medical community has been at fault for not educating patients on the familial risks associated with both colon cancer and advanced adenomas, which are pre-cancerous polyps. We're hoping these tools in the EMR will not only enable providers to take an accurate family history for both cancers and advanced adenomas but also foster patient and intra-family communication for those at increased risk. As a longer-term strategy, we need to see if we can come up with a reliable risk index for EAO CRC. Ideally, the index will prompt providers to ask the right questions about a specific constellation of relevant symptoms, together with other risk factors (e.g., family history, obesity, smoking, alcohol use, diet), and, in so doing, facilitate the identification of a young person at increased risk, even in the absence of a family history.

TW: If we are going to identify young people who are at increased risk, we really need to be taking family histories, which primary care medicine needs to embrace. We call it the "forgotten question." Published literature strongly suggests or documents that in many instances, family history is not being secured. That's unfortunate, because positive family history contributes significantly to the level of risk, and that level of risk impacts screening and surveillance programs. This is true not just for CRC, but breast cancer and other possible malignancies.

We also need to recognize and address the fact that our primary care colleagues need effective, efficient tools to record and update family history

information. Further, positive family history information should be linked to evidence-based screening and surveillance recommendations and reminders; and providing clinical decision support to busy healthcare providers. This is probably best done, in the 21st century, using EHR systems. Currently, few, if any, of the commercially produced EHRs provide family history functionality. Constructive engagement on this issue with our EHR vendor colleagues is a critical piece of the overall strategy required to build awareness, secure earliest possible stage diagnosis and optimally treat EAO CRC.

There's been an over 50% increase in CRC for people age 20-49 since 1994, and that the trend is increasing. Also, 18% of all rectal cancers take place in people under the age of 50. Over the next 10-12 years, that is projected to rise to 25% — a dramatic statistic. This means one-quarter of all rectal cancers will occur in people below the age in which we screen for rectal cancers.

We need to identify people at increased risk, and we need to pay attention to symptoms and signs that might be a warning of a person harboring a malignant disease. We need to invest in giving providers clinical decision support, information and tools that will facilitate securing family history information and identifying people who are at increased risk of CRC at a young age.

DA: For gastroenterologists and endoscopists, there's a bigger opportunity to make a difference. We are the ones who identify most patients with CRC, so we have an opportunity to identify high-risk families: those that have a history of CRC and advanced adenomas. We need to develop a process whereby all our patients with CRC or advanced adenomas are told that this finding not only affects their own future risk of colonic neoplasia but also that of their family members. We should implement a process to reach out to family members that they are at an increased risk and provide then with evidence-based screening recommendations

For more information on the Early Age Onset Summit, including presentation slides, visit ***www.coloncancerchallenge.org****.*

To learn more about the National Colorectal Cancer Roundtable and the work of the Family History and Early Onset Colorectal Cancer Task Group, visit ***www.nccrt.org****.*