COLON AND RECTAL SURGICAL ASSOCIATES

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Increasing Incidence of Colon and Rectal Cancer in Young Adults.

Time To Rethink Screening Strategies?

Colon and Rectal cancer remains the third most common cancer in the United States and the second leading cause of colorectal cancer deaths. In 2014, 136,830 Amer-

cancer, and 50,310 people will die of the disease. These statistics are well known by practitioners and the public. However, a new statistical trend is emerging and the medical community is beginning to sound the alarm.

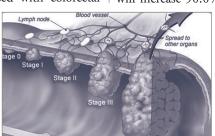


Figure 1: The Stages Of Colon Cancer

icans will be diagnosed with colorectal

"I'M ONLY 42 YEARS OLD! WHAT DO YOU MEAN I HAVE **COLON CANCER?**"

This has become a disturbingly more common patient scenario. While 90% of colon and rectal cancers occur in individuals over the age of 55, there has been a clear trend toward the development of colorectal cancers in our younger population.

A recent MD Anderson retrospective study, evaluating 393,241 patients between 1975 and 2010, showed that the overall age-adjusted colorectal cancer incidence rate decreased by 0.92%. However, while there was a steady decline in patients over the age of 50, the opposite trend was observed in young adults.

AN ALARMING NEW TREND.

Extrapolating the current trends in our under 50 population, in 2030, the incidence of colon cancer and rectal cancers will increase 90.0% and 124.2% respec-

> tively for patients 20 to 34 years of age, and there will be an increase of 27.7% and 46.0% respectively for patients 35 to 49 years. The etiology for this increase is not clear and further studies are underway to identify potential

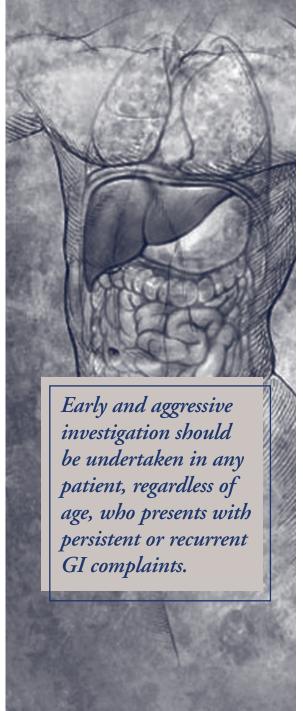
causes for these findings.

Several other studies have shown similar trends and these findings have been shown to occur in both men and women as well as across all ethnicities. However, these worrisome findings were most statistically significant in rectal cancer among young black men and women.

WHY THE INCREASE?

Younger patients at high risk for development of colon and rectal cancer traditionally have been thought to have a predisposing risk factor such as a first degree relative with colon or rectal cancer, hereditary non-polypsis colon cancer (a hereditary

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genetic mutation), familial adenomatous polyposis (another hereditary problem), or personal history of inflammatory bowel disease (ulcerative colitis and Crohn's disease).

However, no specific factors have been found which explain these trends in young patients who have sporadic colon or rectal cancer. Possible factors being evaluated include the role of obesity, type 2 diabetes and smoking. Increasing body mass index (BMI) has been correlated with colon cancer, and it is estimated that the rate of colorectal cancer increases by about 20% per each five unit increase in BMI. The rising BMI seen in young adults in the United States over the last 30 years may represent a possible etiology for the rising incidence of colorectal cancer in young adults. Type 2 diabetes is an independent risk factor as well. Smoking has been demonstrated to be associated with more advanced staged malignant lesions (T3 and T4).

WHAT NEXT? SCREENING AND DIAGNOSIS.

For average risk individuals, screening starts at the age of 50. Screening techniques include an annual high-sensitivity fecal occult blood testing, air-contrast barium enema, flexible sigmoidoscopy combined with fecal occult blood testing, or colonoscopy. Virtual colonoscopy is a new comer to this group. With routine screening, precancerous polyps can be detected and removed. Screening has been the most important factor leading to the decreased cancer incidence seen in the population over 50. High risk individuals are advised to start screening at the age of 40 or younger, depending on the specific risk factor(s).

Currently, there are no recommendations for colon and rectal cancer screening for average risk individuals under the age of 50. Therefore, it is up to the clinician to identify those individuals under the age of 50 and investigate further for the possibility of colon or rectal cancer.

Signs and symptoms of colorectal cancer including rectal bleeding, abdominal pain, weight loss and a change of bowel habits, have been evaluated to see if they may show a difference between younger and older patients with colon or rectal cancer. Only the presence of abdominal pain in younger patients was seen to be statistically correlated with the presence of colorectal cancer, when compared with patients over 50. Older patients have been postulated to have a decreased production of chemical mediators that are involved in the visceral pain pathway as compared to younger patients. However, any patient with unexplained persistent rectal bleeding, weight loss or persistent change in bowel habits clearly warrants further investigation.

MANAGEMENT AND OUTCOME. TREATMENT PATHS CONVERGE.

While it seems that younger patients may have a longer time lag between onset of symptoms and diagnosis, older and younger patients had similar pathologic stages at time of diagnosis. Furthermore, studies have shown that stage for stage, overall survival between the old and the young are statistically equivalent (69% and 61%), and cancer-free survivals are also equivalent (63% and 62%). However, as there are no screening guidelines for younger age groups, it is unclear whether

or not earlier stage cancers would be identified without the onset of symptoms, in the younger patients. Perhaps lowering the age of first colorectal cancer screening may be helpful in this regard.

Once a diagnosis of colon or rectal cancer is made in younger patients, management remains the same as in older adults. All patients should have a colonoscopy to rule out synchronous lesions. Baseline carcinoembryonic antigen levels (CEA) should be evaluated, baseline staging CT scanning with or without PET scanning is recommended, and endorectal ultrasound or rectal MRI should be considered in patients with rectal malignancies.

RECTAL CANCER IS APPROACHED DIFFERENTLY THAN COLON CANCER.

Operative extirpation remains the mainstay of management for colon and rectal cancer, however neoadjuvant chemoradiation (treatment prior to operative treatment) should be instituted in rectal cancer in patients with T3 or T4 lesions, or in any rectal cancer patients with known or suspicious nodal disease. Preoperative chemoradiation in rectal cancer has been shown to decrease local recurrence rates and increase overall survival.

COLON CANCER.

For patients with colon cancer but without evidence of metastatic disease, surgery is the primary treatment modality. Postoperative adjuvant chemotherapy is recommended for all patients with stage 3 or stage 4 disease. Some oncologists are recommending the use of adjuvant chemotherapy in selected stage 2 patients, especially in young patients with lesions having aggressive findings, such as elevated preoperative CEA levels more than 5 ng/mL, diagnosis in the setting of bowel obstruction or perforation, the need for an emergent operation, T4 stage (extension to adjacent organs), inadequate nodal resection (< 12 nodes), or peritumoral lymphatic or venous invasion. However, multiple studies have shown only a 2 to 4% survival advantage with adjuvant chemotherapy, and even this has failed to reach statistical significance.

THE TAKE HOME LESSON? INCREASED VIGILANCE. YOU CAN'T DIAGNOSE IT IF YOU DON'T CONSIDER IT.

With advances in screening techniques, namely more regular use of colonoscopy in patients over the age of 50, there has been a clear decrease in the incidence of colon and rectal cancers. However, an unexpected increase in the incidence of sporadic colorectal cancer has been seen in younger adults. While etiology studies are in progress, no definitive cause has been identified which clearly explains this vexing increase. Risk factors may include obesity, type 2 diabetes and smoking.

This trend creates a significant new challenge for clinicians who are often called upon to sort out common and benign gastrointestinal complaints, from those that may hint at a more sinister pathology. Early and aggressive investigation should be undertaken in any patient, regardless of age, who presents with persistent or recurrent GI complaints.