

Obesity and colon cancer: a predicted pandemic among young adults

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The latest statistics confirm that colorectal cancer strikes earlier and will soon become the leading cause of cancer death in adults under 50 years of age.

Historically, colorectal cancer represented the prototype of a slowly growing cancer, requiring several decades to gradually acquire the numerous mutations required to evolve from the initial precancerous lesion (polyp) to a clinically detectable tumor, generally after 65 years of age.

In recent years, however, there has been an unprecedented increase in the incidence of colorectal cancer in young adults under 50 years of age, around 2 to 4% per year, this increase even reaching 8% annually in under 30 years old. (1)

Since our genes have obviously not changed in such a short time, the early appearance of a cancer that normally takes several decades to appear necessarily implies that factors associated with modern lifestyle considerably accelerate the appearance and the development of these tumors.

EARLIER AND MORE AGGRESSIVE

According to an editorial recently published in the prestigious journal *Science*, it is really urgent to look into this new trend if we want to avoid a real health catastrophe in the coming years. (2)

As the authors mention, not only does colorectal cancer declare itself earlier, but it also has a more aggressive character: early tumors have a distinct clinical presentation, with a predilection for the left side (the descending portion of the colon), and affected patients are often diagnosed with a more advanced (metastatic) tumor.

Consequently, even if these patients are young and less affected by other health problems (comorbidities) than older ones, they do not show superior survival despite the possibility of using treatments that are more aggressive. (3)

For all these reasons, specialists anticipate that early colorectal cancer could become the leading cause of cancer death for young adults aged 20-49 by 2030. (1)

METABOLIC DISORDERS

However, this situation is not irreversible since it has been clearly demonstrated that several risk factors associated with modern lifestyle are responsible for this increase in the incidence of early colorectal cancer.

Pervasive obesity and associated metabolic disorders, a problem that has been on the rise in recent decades, clearly play a role.



A large study of 85,256 women found that obesity in adolescence is associated with a significantly higher risk of early colorectal cancer in their 40s. (4)

A negative impact of modern diets (sugary drinks, red meats and sausages), physical inactivity as well as various metabolic disorders (hypertension, hyperlipidemia, hyperglycemia, type 2 diabetes mellitus) has also been observed.

Overall, therefore, the rising incidence of early colorectal cancer affecting young adults under the age of 50 can be seen as another tangible (and dramatic) manifestation of the disastrous consequences of obesity resulting from poor modern dietary habits.

Our individual and societal laxity in the face of overweight will have catastrophic consequences in the future, by disproportionately mobilizing medical resources that will no longer be available to treat other less prevalent health problems.

The support of a health system has its limits, which are already being exceeded, and this tsunami of overweight is only in its beginning.

- (1) Akimoto N et al. Rising incidence of early-onset colorectal cancer – a call to action. *Nat. Rev. Clin. Oncol.* 2021; 18: 230-243.
- (2) Giannakis M and Ng K. A common cancer at an uncommon age. *Science* 2023; 379:1088-1090.
- (3) Lipsyc-Sharf M et al. Survival in young-onset metastatic colorectal cancer: findings from Cancer and Leukemia Group B (Alliance)/SWOG 80405. *J. Natl Cancer Inst.* 2022; 114: 427-435.
- (4) Liu PH et al. Association of obesity with risk of early-onset colorectal cancer among women. *JAMA Oncol.* 2019; 5: 37-44.