

The growing menace of pancreatic cancer

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Translated from Le Journal de Montréal, May 21, 2018

It is predicted that pancreatic cancer could become the second most common cause of cancer deaths in coming years.

Although it ranks only twelfth amongst the new cases of cancers diagnosed in Canada in 2017, pancreatic cancer represents the 4th greatest cause of cancer mortality in both men and women. This heavy burden reflects the extraordinary destructive power of this disease: of all cancers, that of pancreas is actually the one which presents the lowest chance of survival at 5 years (<5%), most of the patients dying in the initial months following diagnosis.

This high level of mortality is explained by the impossibility of suitably treating this cancer when it is diagnosed in an advanced stage, as is often the case. This cancer is characterized by a silent progression, without apparent symptoms, and very quickly forms metastases. When the first alarming signals appear (jaundice, weight loss, fatigue and pain in the abdomen or back), it is quite often the case that the cancer has already spread into nearby tissues (liver, lymph nodes) and cannot be removed by surgery.

INCREASED INCIDENCE

Another disturbing aspect of pancreatic cancer is that many specialists predict that its toll risks increasing in the future and that this disease may become the second greatest cause of cancer deaths here by 2030¹.

A recent article summarized the principal factors which explain this increased incidence²:

1. Obesity and diabetes. Historically, smoking has represented the principal lifestyle factor associated with an increased risk for pancreatic cancer (the risk is doubled in smokers). With the drastic fall in the numbers of smokers, one would normally expect to see the incidence of pancreatic cancers strongly decreasing, similar to the decrease in lung cancers which has been observed for the past dozen years. Unfortunately, these gains have been countered by the dramatic increase in the levels of obesity and diabetes, which are also important risk factors for pancreatic cancer.
2. Better identification of cancer cells. The constant improvement in diagnostic tools (high definition imaging, ultrasensitive genetic and biochemical tests) have made it now possible to determine with greater precision the origin of cancer cells. Tumors which had previously been classified as having unknown origins can now be identified and many have pancreatic origins.



3. The improvement in effectiveness of treatment for many cancers. Screening and the development of new medications have led to a significant reduction in the mortality rates for cancers of breast, prostate and colon. These advances have unfortunately not had the same success in the treatment of pancreatic cancer, so that an even greater proportion of cancer mortality is linked to the patients who have developed this form of cancer.

OBESITY AND CANCER

Excess fat represents a pathological state associated with chronic inflammation, overproduction of many growth factors and important metabolic derangements which, collectively, favour the development of many forms of cancers. Regarding pancreatic cancer, studies have shown that people who are obese at the onset of adult age (20-49 years) have 150% greater risk of being struck by pancreatic cancer and the development of this cancer will occur 2 to 6 years earlier than in people of normal weight³.

Prevention remains the key for diminishing the incidence of pancreatic cancer and reducing its heavy toll on mortality. This is all the more important as we are at greater risk of developing this cancer than had been thought, since autopsies performed on people dead from causes other than cancer have shown that 75% of the population has precancerous lesions in the pancreas⁴. Avoiding smoking, keeping a healthy weight and reducing the consumption of red meats and cured meats while increasing plant-based sources of protein remain the best known ways to limit the progression of these micro-tumors and to prevent the development of pancreatic cancer.

- (1) Rahib L et al. Projecting cancer incidence and deaths to 2030: the unexpected burden of thyroid, liver, and pancreas cancers in the United States. *Cancer Res.* 2014;74:2913-2921.
- (2) Wallis C. Why pancreatic cancer is on the rise. *Scientific American*, 1 avril 2018. <https://www.scientificamerican.com/article/why-pancreatic-cancer-is-on-the-rise/>
- (3) Li et al. Body mass index, age of onset, and survival in patients with pancreatic cancer. *JAMA* 2009;301:2553-2562.
- (4) Cubilla AL and PJ Fitzgerald. Morphological lesions associated with human primary invasive nonendocrine pancreas cancer. *Cancer Res.* 1976;36:2690-8.