Diabetes Mellitus as a Risk Factor of Interval Colon Cancer

Jan Brož^a Falah M.A. Salih^b

^aDepartment of Internal Medicine University Hospital Motol, Second Faculty of Medicine, Charles University, Prague, Czech Republic; ^bFaculty of Medicine and Health Sciences, UMS, Kota Kinabalu, Malaysia

The article published by Laish et al. [1] presented the results of a retrospective study that focused on interval colorectal cancer (CRC). Two of the main findings of the study were that patients with interval CRC tend to be older and diabetic. The authors suggested that more careful or more frequent screening be performed for determining pre-malignant lesions in those patients. The study team collected and analyzed a large amount of data, leading to an interesting and important debate. Nevertheless, we would like to make 2 comments that may contribute to further detailed discussions of the issue.

(1) As in most other CRC-related studies [2], in the analysis, the authors considered diabetes mellitus as one disease. But diabetes mellitus is a group of metabolic diseases resulting from various pathogenic defects, which may be treated in different ways. The most common type 2 diabetes is associated with insulin resistance, one of the possible CRC risk factors [2]; while in

patients with the second most common type 1 diabetes, we can presume its longer duration at the time of the CRC diagnosis, which is another risk factor suspected of playing a role in the development of CRC [2]. Therefore, it would be interesting to distinguish these 2 types of diabetes at least between patients and analyze them separately.

(2) Another factor that would be worthy of analysis is the presence of insulin therapy, especially in type 2 diabetes mellitus. It was suggested that chronic insulin therapy is associated with an increased colorectal adenoma risk among type 2 diabetes patients [2, 3]. On the contrary, metformin, the most commonly used oral antidiabetic drug, may have a preventive effect in relation to CRC [4]. Therefore, this drug would also be an interesting target for detailed analysis.

With great respect, we suggest that these comments are taken into consideration if the continuation of the study is planned.

Acknowledgment

Our special thanks are due to Dion Pritchard for language editing.

Statement of Ethics

This article does not contain any studies that involves human participants or animals.

Disclosure Statement

The authors declare that they have no conflicts of interest to disclose.

Funding Sources

This article was financially supported by the Ministry of Higher Education, Malaysia, project No. FRGS/1/2018/SKK10/UMS/01/1 FRG0480-2018.

References

- 1 Laish I, Mizrahi J, Naftali T, Konikoff FM. Diabetes Mellitus and Age are Risk Factors of Interval Colon Cancer: A Case-Control Study. *Dig Dis*. 2019;37(4):291–6.
- 2 Yuhara H, Steinmaus C, Cohen SE, Corley DA, Tei Y, Buffler PA. Is diabetes mellitus an independent risk factor for colon cancer and rectal cancer? *Am J Gastroenterol*. 2011 Nov; 106(11):1911–21.
- 3 Yin S, Bai H, Jing D. Insulin therapy and colorectal cancer risk among type 2 diabetes mellitus patients: a systemic review and meta-analysis. *Diagn Pathol*. 2014 May;9(1): 91.
- 4 Xu J, Ye Y, Wu H, Duerksen-Hughes P, Zhang H, Li P, et al. Association between markers of glucose metabolism and risk of colorectal cancer. *BMJ Open*. 2016 Jun;6(6):e011430.