Colorectal Cancer Epidemiology: Incidence, Clinical, Pathological and Molecular Features

Aalaa S. Shubbar, MBBS* Safa Al Shaikh, MBBS** Maheeba Abdulla Mohamed, MD***

Background: Colorectal carcinoma is the second most common cancer in the Kingdom of Bahrain, in both males and females.

Objective: To evaluate the incidence, clinical presentation, histopathologic diagnosis and molecular genetic testing for colorectal carcinoma.

Setting: Pathology Department, Salmaniya Medical Complex, Bahrain.

Design: A Retrospective Study.

Method: Ninety-seven patients who were diagnosed with colorectal cancer from January 2016 to March 2018 were included in the study. Patients' clinical information, histopathology and molecular testing results were documented.

Result: Between January 2016 to March 2018, 97 newly diagnosed cases of colorectal cancer were documented; 48 (49.5%) were males and 49 (50.5%) were females. The average age at the time of diagnosis was 60 years. Resection specimens accounted for 54 (56%) cases and the biopsy specimens were 22 (23%) cases. The remaining 21 (21%) specimens were received for second opinion or for molecular testing.

The most common clinical presentation was per rectal bleeding, 29 (30%). Eighty-one (84%) were diagnosed as moderately differentiated adenocarcinoma. The tumor was located in the distal part of the colon in 37 (38%) cases. Thirty-eight (39%) of the newly diagnosed cases were discovered at advanced pathological stages. The molecular testing revealed that 7 (7%) had Microsatellite Instability (MSI), 27 (28%) had KRAS mutation and 18 (19%) had TP53 mutation.

Conclusion: The majority of the patients were diagnosed at an advanced stage. The incidence and mortality can be decreased with an improved screening program and detecting cases at an early stage. Genetic testing plays an important role in improving patient outcome.

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