

Demographic and Clinico-Pathological Characteristics of Non-Metastatic Colon Cancers according to the MSS/MSI Profile in North-Eastern Tunisia

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ABSTRACT

Colorectal cancer (CRC) is a heterogeneous disease with multiple epigenetic alterations and different molecular features. Molecular profiling of CRC has the advantage of providing essential information in the pathogenesis of cancer and, also, about prognosis and therapy.

Aim of the study was to compare the frequency, the demographic and clinic-pathological characteristics of non-metastatic colon cancer according to the molecular profile. The secondary outcome, as we have a cost problem to perform the molecular profile for all our patients, was to identify the demographic and clinico-pathological profile of the MSI group in order to target our histopathological study.

The study included 71 patients with non-metastatic colon cancer. Demographic data, clinical and pathological data and immunohistochemistry staining pattern (4 mismatch repair proteins were investigated) were assessed.

According to microsatellite instability status, patients were divided into 2 groups: microsatellite stable (MSS) =49 patients and microsatellite instability (MSI) = 22 patients.

Microsatellite instability was found in 31% patients. More patients in the MSI group than in the MSS group were male (63.6% vs 40.8%), were under the age of 54 years (63.6% vs 34.7% with significant p of 0.023) and has a BMI ≥ 30 (18.2% vs 4.1%). The 2 group had a family history of colon cancer (13%). Diabetes was present much more in the MSS group (30.6% vs 18.2%). The MSI group was associated with ascending colon location of the tumors (40.9% vs 30.6%). The most frequent macroscopic aspect in the 2 groups was the budding aspect (more than 63%). As well as the stage II of tumor (more than 55%), the low histological grade (81%) and the perineural invasion (31%) were similar in the 2 group. While the lymphovascular invasion was twice as frequent in MSS group than MSI group (40.8% vs 22.7%). The 5-years recurrence was respectively 24.5% in MSS group and 13.6% in MSI group.

Keywords: Non-metastatic colon cancer, Microsatellite stable, Microsatellite instability

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