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Letter to the Editor

Is There a Connection Between Colon Cancer and Familial Mediterranean Fever?

Ailesel Akdeniz Ateşi ve Kolon Kanseri Birlikteliği: Abdominal Kitleden Hangisi Sorumlu?

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Familial Mediterranean fever (FMF) is a hereditary disorder characterized by repeated attacks of inflammation of serosal surfaces concomitant with fever. As a result, in 25% of the patients develop amyloid A (AA) amyloidosis.[1] In addition, there are case reports which indicate that FMF can occur alongside gastric lymphoma, bronchoalveolar carcinoma, malignant peritoneal mesothelioma, and carcinoid tumors of the small intestine,[2] no connection has been established between colon cancer and FMF.

A 55-year-old male patient with a 10 year history of FMF that was confirmed by both clinical findings and laboratory results was admitted to our facility with abdominal pain and rectal bleeding. The patient was being treated with regular doses of colchicine and had lost six kilograms over the previous three months. A physical examination of the abdomen revealed no abnormal results. Since he was positive for fecal occult blood, a colonoscopy was performed to rule out any malignancy of the colon. During this procedure, a mass was discovered in the sigmoid colon. A biopsy was performed, and the patient tested positive for adenocarcinoma, resulting in the subsequent surgical removal of the mass. A pathological examination confirmed the diagnosis of adenocarcinoma, and an amyloid deposit was also identified in the same sample. There was no indication of adjuvant chemotherapy; therefore, the patient was discharged with a follow-up examination plan.

Familial Mediterranean fever, seen more commonly in Turkish, Armenian, Arabic, and Jewish populations, is a genetic disorder that manifests with recurrent inflammation of the serosal membranes and fever. Secondary amyloidosis is a process which can result from various chronic inflammatory reactions, which leads to amyloid deposits in several tissues.[1] Because FMF is a chronic disease in which recurrent episodes of inflammation take place during its course, secondary amyloidosis due to FMF occurs in 25% of the patients with this disease.

There are reports[2] that show a co-occurrence of a group of malignancies with FMF, which leads to the conclusion that some connections between FMF and carcinogenesis have been established. There are well-known associations between inflammatory bowel disease and colon carcinoma, hepatitis B/hepatitis C and hepatocellular carcinoma, Barrett metaplasia due to gastroesophageal reflux, and esophagial carcinoma.[1,3] Familial Mediterranean fever is thought to be a cofactor for carcinogenesis because of its inflammatory nature since the inflammation causes the production of reactive oxygen molecules

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which may damage DNA along with a protein structure that contributes to carcinogenesis.[3]

Growth factors and cytokines secreted from inflammatory cells may assist in the development of tumor cells. The serum AA protein, most commonly seen in the course of FMF, is an acute phase reactant synthesized by the liver. It is also another component of biochemical reactants, which are separate from the cytokines, that plays a role in the inflammatory process of FMF. In addition, serum AA protein has a part in the development of carcinogenesis.[3] Furthermore, amyloid tumors in the intestines are rare, but they have been known to mimic cancer.[4] This occurs when these deposits in the gastrointestinal tract form large masses of eosinophilic, homogeneous material. Therefore, when a mass is detected in the intestines of a patient with FMF, it is important to remember that amyloidoma could be the cause. However, before a mass is defined as amyloidoma, colon cancer should first be ruled out.[4,5] To differentiate between amyloidoma and cancer, a biopsy followed by a histopathological examination is usually performed. However, as was the case with our patient, both amyloid deposits and malignant cells may sometimes be seen in the same sample.

Our aim for reporting this case was to contribute valuable information to help determine whether or not FMF tends to lead to colon cancer. However, since only a few reports exist on this topic in the literature, further investigations and studies with larger series are needed to clarify the relationship between these two diseases.

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