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Rising Early Onset Colorectal Cancer in Pakistan Demands Urgent Awareness and Prevention

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Colorectal cancer (CRC) has been traditionally regarded as a disease of old age, but there is recent evidence suggesting a frightening change in its epidemiology. CRC is the third most prevalent malignancy worldwide, with a 9.4 percent rate of cancer-related deaths in men and 10 percent in women [1]. In the past, Pakistan was considered a low-risk country regarding CRC but recent statistics indicate an increase in the disease, especially among people below the age of 50 years, which points to the observed phenomenon known as early-onset colorectal cancer (EDCRC) [2, 3].

Early-onset CRC is a unique clinical and biological subgroup, which tends to be more aggressively histologically and has higher-grade tumors. In a retrospective study of 232 patients with CRC at Shifa international hospital, Ibrar et al. observed that 36.2 percent of the cases were found among patients who are above 50 years of age [4]. Notably, poor prognosis associated with mucinous adenocarcinoma and signet ring cell carcinoma -histological subtypes were more common in younger patients with 60.7 and 56.2 percent cases falling below the age of 50 years of age. Poorly differentiated (Grade III) tumors were also linked to these subtypes with the emphasis on an aggressive nature of disease in early stages. Although the most common type in the general case, adenocarcinoma was relatively not as aggressive among the younger patients as only 30.8% of the cases were less than 50 years [4].

The results are indicative of trends in the world. Gao et al. revealed that EOCRC tends to manifest itself with later-stage pathology, mucinous or signet ring cell histology and low differentiation. In Pakistan, similarly, it is reported that the mean age at diagnosis has decreased, with right-sided colon cancers usually diagnosed at a mean age of 43.9 years and left-sided tumors at 49.8 years, many of high-grade histology [5]. This change highlights the ineffectiveness of traditional screening methods that start in age 50 leaving younger age groups susceptible to late diagnosis and worse prognoses.

The etiology of early-onset CRC is multifactorial. Definitely genetic predispositions have a role to play especially in the syndromic cases but lifestyle and dietary factors are also taking a very important role. Abid and Parvez emphasized the importance of the diet, which proved that proinflammatory diets containing fats and proteins can change gut microbiota, promote the formation of metabolites, and raise the risk of CRC [6]. Wheras, a great number of dietary fibers has anti-inflammatory effects and possibly alleviates this threat. This nutritional effect is especially applicable in areas of Northern Pakistan where a high level of red meat intake is common which implies that a dietary counseling approach may act as a cost-efficient preventive intervention measure in high-risk groups.

Although there has been an increase in EOCRC, Pakistan has no national cancer registry and population-based screening programs are virtually non-existent. This causes a significant delay between the appearance of symptoms and diagnosis and a significant number of patients come at late stages. According to Ibrar et al., 46.9% of cases of CRC came to the Stage III, and

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25% already had metastatic disease, and it is necessary to detect the disease as soon as possible [4]. The awareness programs that were successful in other countries like CDCs screen for life may be scaled down to fit the Pakistani situation. These efforts, based on digital media, social media, and community outreach, can inform the population about CRC red flags, such as rectal bleeding, iron-deficiency anemia, and ongoing alterations in bowel patterns, and prompt them to seek medical attention early [6, 7].

The detection of the disease at an early stage is especially important in relation to mucinous and signet ring cell subtypes, which are characterized by a lower disease-free and overall survival than the conventional adenocarcinoma. Subgroup analyses show that the difference in survival decreases with the later the stage of diagnosis of CRC, which supports the life-saving benefits of early diagnosis [8, 9]. Without the extensive colonoscopic screening, more specific measures targeting at-risk groups, such as first-degree relatives of patients with CRC and young people with red-flag symptoms, could be the most plausible solution to be applied in Pakistan.

Colorectal cancer is a new and threatening issue to the Pakistani population that develops at a young age. Its increasing prevalence, aggressive histological subtypes, and late stage of presentation are all causes of poor prognoses. To reduce this load, a multifaceted strategy is necessary: the creation of awareness of the symptoms of CRC, dietary and lifestyle changes, and the creation of specific screening programs in younger populations. More studies tailored to the Pakistani setting are also urgently required to focus more on the prevention measures and eventually decrease morbidity and mortality rates related to EOCRC.

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