

Colon cancer a new epidemic

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One swears by whole meal bread, one by sour milk; vegetarianism is the only road to salvation of some, others insist not only on vegetables alone, but on eating those raw. At one time the only thing that matters is calories; at another time they are crazy about vitamins and roughage. The scientific truth may be put quite briefly; eat moderately, have an ordinary mixed diet and don't worry. (Sir Robert Hutchinson, in Newcastle Medical Journal 1932, Vol 12)

So much has been said about the diet and dietary pattern that most often leaves a common man and sometimes the physician in utter confusion. With the dawn of age of information the information available at the click of a button is enormous but what is right and what is wrong and the authenticity of the information always remains a debatable issue. The high fibre diet is considered to being protective and consumption of red meat and processed meat and food to be associated with increased risk of colon cancer. British medical Journal published an article titled 'Diet and Colonic Cancer' in 1974 supporting the hypothesis of low fibre diet and refined carbohydrates as aetiology for colon cancer given by Mr Dennis Burkitt in Africa.^[1, 2] This was challenged by Dr SL Malhotra (of Indian Railways from Calcutta) stating that his work was done at least a decade ago confirming the same hypothesis and no due credit has been given to him.^[3, 4] Since then thousands of case control, cohort and randomised interventions trial were conducted spanning over more than three decades with large study designs to minimise bias but failed to provide a consistent result or substantial reduction in CRC using diet high in fibres and fruits. In the largest pooled analysis of 14

studies with 756,217 subjects who were followed up for 6 to 20 years, fruit and vegetable intakes were not strongly associated with a lower risk overall but may be associated with a lower risk of distal colon cancer.^[5] Similarly the billion dollar Women's health initiative randomised trial also failed to reduce CRC in participants randomised to low fat, high fruits and vegetables arm.^[6] In general these meta-analysis report that vitamin D, vitamin B and folic acid are associated with reduced risk of CRC.

Coming on to the Indian scenario India in the last 10 years or so has made tremendous progress and is seen by the world as the largest growing economy. The average house hold income has increased GDP has grown also the spending capacity of an average indian has increased manifolds. This growth and industrialisation also has added to the disease burden of modern society and one of the diseases which as surgeons we are encountering more and more is colorectal cancer. But this rise could be because of increase in the Indian population along with ageing of the Indian population.

It is important to find the factors for the CRC in Indian scenario that will help in prevention of the disease. For decades it has been believed that the predominantly vegetarian diet with high fibre and low meat intake is responsible for the low CRC incidence in India. All the large prospective studies and meta-analysis suggest that other causative possibilities need to be examined. Plausible mechanisms include consumption of fewer calories and alcohol by vegetarians as well as diet-induced variations in the intestinal immunity modulated by the gut

microbiota.^[7] In the absence of robust data from controlled clinical trials, the general principles for cancer prevention should have a holistic approach with emphasis on a healthy diet and health promotion activities. We need to address the rapidly increasing problem of vitamin D deficiency among rural and urban Indians.^[8] Also there has been a lot of research into the anticancer effects of Aspirin and it has been found out to help downstage the tumour, lower risk of developing metastasis along with better 5 year progression free interval.^[9]

Facilitating access to CRC screening is an important key to reducing the burden of CRC. There are three frequently used screening modalities, namely fecal occult blood tests (FOBT), flexible sigmoidoscopy (FS) and total colonoscopy, each with their advantages and disadvantages. Among these three, biennial guaiac-based FOBT is the only method shown in large randomized studies to decrease mortality.^[10-12] There is very low public awareness of this emerging disease burden in India and a very little support from health authorities. It is high time that we as clinicians take up this challenge and start with public awareness campaign against this threat which is looming around the corner.

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