Diet and risk of inflammatory bowel disease

Background: A better understanding of the environmental factors leading to inflammatory bowel disease should help to prevent occurrence of the disease and its relapses. Aim: To review current knowledge on dietary risk factors for inflammatory bowel disease. Methods: The PubMed, Medline and Cochrane Library were searched for studies on diet and risk of inflammatory bowel disease. Results: Established non-diet risk factors include family predisposition, smoking, appendectomy, and antibiotics. Retrospective case–control studies are encumbered with methodological problems. Prospective studies on European cohorts, mainly including middle-aged adults, suggest that a diet high in protein from meat and fish is associated with a higher risk of inflammatory bowel disease. Intake of the n-6 polyunsaturated fatty acid linoleic acid may confer risk of ulcerative colitis, whereas n-3 polyunsaturated fatty acids may be protective. No effect was found of intake of dietary fibres, sugar, macronutrients, total energy, vitamin C, D, E, Carotene, or Retinol (vitamin A) on risk of ulcerative colitis. No prospective data was found on risk related to intake of fruits, vegetables or food microparticles (titanium dioxide and aluminium silicate). Conclusions: A diet high in protein, particular animal protein, may be associated with increased risk of inflammatory bowel disease and relapses. N-6 polyunsaturated fatty acids may predispose to ulcerative colitis whilst n-3 polyunsaturated fatty acid may protect. These results should be confirmed in other countries and in younger subjects before dietary counselling is recommended in high risk subjects.