Crohn’s and ulcerative colitis

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Crohn’s disease (CD) and ulcerative colitis (UC) are common and heterogeneous chronic inflammatory bowel disorders of childhood that account for up to 25% of all patients with inflammatory bowel disease (IBD). In CD, the familial pattern of disease concordance would suggest that genetics contribute to disease etiology. Children are more likely to have proximal small bowel disease complicated by stricture formation, fistulization and the need for surgical intervention. The predisposition for small bowel disease has been associated with mutations of the nucleotide oligomerization domain 2 (NOD2)/Caspase activation and recruitment domain 15 (CARD15) gene on chromosome 16 in 1/3 of patients with CD. Homozygous patients also show an early age at disease onset and a relatively high relative risk for isolated strictureting distal ileal disease. Although a vast number of other gene polymorphisms have been identified, the role for genetic testing in either the diagnosis or the therapeutic management of patients with CD has yet to be determined. Although, the precise age of onset of CD can be difficult to determine in children, subclinical phases of disease associate well with a decrease in weight and height velocity, and a delay in pubertal development. A confident distinction between CD and UC also remains a taxonomic dilemma in 25% of pediatric patients with IBD, despite recent technological advances in diagnostic techniques, including magnetic resonance enterography (MRE), serological testing, and more recently contrast enhanced ultrasound. The early introduction of biological therapies, either alone or concurrently with azathioprine or methotrexate have proven efficacy in maintaining long-term remission without corticosteroids. The monitoring of drug levels, as well as neutralizing antibodies against anti-TNF therapy has allowed physician’s to individualize drug therapy to improve clinical response, and reduce the risk of drug induced toxicity. Novel biological and immunosuppressant treatment strategies are now in development in pediatric patients with IBD with the aim at improving overall treatment efficacy and avoid the need for surgery.

Biography

Carmen Cuffari is Associate Professor of Pediatrics at The Johns Hopkins University, USA and completed his MD from University of Ottawa. He was a Research Assistant for Dr. S Qadir at University of Ottawa.

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