Aetiology

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There is no unifying hypothesis regarding the aetiology of acute appendicitis. Decreased dietary fibre and increased consumption of refined carbohydrates may be important. As with colonic diverticulitis, the incidence of appendicitis is lowest in societies with a high dietary fibre intake. In resource- poor countries that are adopting a more refined Western-type diet, the incidence continues to rise. This is in contrast to the dramatic decrease in the incidence of appendicitis in Western countries observed in the past 30 years. No reason has been established for these paradoxical changes; however, improved hygiene and a change in the pattern of childhood gastrointes tinal infection related to the increased use of antibiotics may be responsible. While appendicitis is clearly associated with bacterial prolif eration within the appendix, no single organism is responsible. A mixed growth of aerobic and anaerobic organisms is usual. The initiating event causing bacterial proliferation is contro v ersial. Obstruction of the appendix lumen has been widely held to be important, and some form of luminal obstruction, either by a faecolith (Figure 76.5) or by a stricture, is found in the majority of cases. A faecolith (sometimes referred to as an appendicolith) is composed of inspissa ted faecal material, calcium phosphates, bacteria and epithelial debris. Rarely , a foreign body is incor porated into the mass. The incidental finding of a faecolith is a rela tive indication for prophylactic appendicectomy or an Reginald Heber Fitz , 1843–1913, Professor of Medicine, Harvard University , Boston, MA, USA. Charles McBurney , 1854–1913, Professor of Surgery , Columbia College of Physicians and Surgeons, New Y ork, NY , USA. In 1889 McBurney published a paper on appendicitis in which he stated, ‘I believe that in every case the seat of greatest pain “determined by the pressure of one finger” has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus.’ - - - - - - - ter interval appendicectomy in a patient treated conservatively . A fibrotic stricture of the appendix usually indicates previ - ous appendicitis that resolved without surgical intervention. Obstruction of the appendiceal orifice by tumour, particularly carcinoma of the caecum, is an occasional cause of acute appendicitis in middle-aged and elderly patients. Intestinal Enterobius vermicularis (pinworm), can parasites, particularly proliferate in the appendix and occlude the lumen. -

Figure 76.5 Coronal reformat of a computed tomography scan of the abdomen obtained with oral and intravenous contrast, demonstrating an in /f_l amed, enhancing and enlarged appendix that is curled in the midline extending towards the pelvis (arrow). It contains multiple radiopaque appendicoliths. There is extensive periappendiceal fat stranding (courtesy of Professor P MacMahon, FRCR, Dublin, Ireland).

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