Figure 1 Relationships between age, body mass index, physical activity and fibre intake with faecal calprotectin geometric mean; bars, 1 (SE; y axis logarithmic scale). Age quartiles (years) 1 = 50–54, 2 = 55–59, 3 = 60–64 and 4 = 65–70. Body mass index (BMI) quartiles (kg/m^2) 1 = 17.6–23.5, 2 = 23.6–25.6, 3 = 25.7–28.1 and 4 = 28.2–41.2. Fibre quartiles (%) 1 <9.8, 2 = 10–13.9, 3 = 14–16.7 and 4 = 17–38.8.⁵

strongly with the risk of colorectal cancer, suggesting that the paracrine effects of mesenteric or serosal fat may be important. The association between lack of physical exercise and colorectal cancer can also be explained by an activated immune state secondary to a decreased vagal tone in physically unfit individuals.⁹ IIA and chronic inflammation are characterised by chronic NF κ B activation, which in turn promotes tumorigenesis by inhibiting apoptosis.³ These findings suggest that environmental factors could influence the development of CRC through activation of the innate immune system and its effect on promoting gut inflammation.

Proinflammatory mediators have been shown to increase gut permeability and consequently exposure to luminal antigens. For example, patients with histologically proven quiescent Crohn's disease have increased gut permeability, attributable to the heightened local expression of TNF α .¹⁰ Treatment with infliximab (anti-TNF α agent) is associated with a decrease in gut permeability in patients with active Crohn's disease.¹¹ Although most of the evidence emerges from studies in disease groups, similar mechanisms, albeit at a sub-clinical level, may operate in normal obese individuals. As well as the increased circulating levels of proinflammatory mediators and free fatty acids associated with innate immune activation, the paracrine effects of adipokines secreted by mesenteric or serosal fat could directly influence gut barrier function. Increased exposure to luminal antigens will induce a local immune response resulting in mucosal inflammation.

Epidemiological and cell culture studies have shown a correlation between CRC, hyperinsulinaemia and increased levels of insulin-like growth factor 1 (IGF1). Although insulin has been shown to directly stimulate the growth of colon cancer lines in vitro, its role in initiating tumorigenesis is doubtful as it is known to have anti-inflammatory properties. The role of IGF1 as a procarcinogen is much better

established, acting by promoting cell growth and inhibiting apoptosis. However, as mentioned by Frezza *et al.*,¹ recent studies have not shown a significant correlation between CRC and IGF1 levels when a Bonferroni adjustment was applied. Furthermore, insulin resistance may be the result of IIA associated with obesity. This calls for a need to reconsider "insulin resistance" as the underlying mechanism.

In conclusion, IIA could be the link between environmental risk factors and CRC. Processes secondary to IIA, such as chronic gut inflammation and insulin resistance, promote tumorigenesis. We propose that gut inflammation is the dominant mechanism responsible for the increased incidence of CRC in obese individuals, and believe that the role of insulin resistance could represent an epiphenomenon. Further research in this direction is warranted.

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BOOK REVIEWS

Oxford Handbook of Gastroenterology

Edited by Stuart Bloom, George Webster. Oxford: Published by Oxford University Press, 2006, £29.95, pp 726. ISBN 0-19-856652-2

This is one of the latest additions to the Oxford handbook series, which now comprises over 30 titles covering the entirety of medical practice. It is aimed at medical students, doctors in training, nurses and general practitioners. It is also designed to be a useful aide memoire for senior gastroenterologists. Now that the days of doctors wearing white coats with capacious pockets are over, at least in the UK, it is intended to be carried in rucksacks or handbags. It weighs in at 402 g so is practical to be

carried around hospital wards and outpatient departments.

It is divided into four sections, which have colour-coded pages to aid navigation through the book. The first section covers approaches to 28 common clinical problems. This is an excellent section. Each of the four sections starts with the differential diagnosis, and for conditions with a large differential diagnosis, such as chronic diarrhoea, a pathophysiological framework is given to aid both understanding and memory. I was delighted to see that the old-fashioned prohibitions on the use of antimotility drugs and antibiotics in acute diarrhoea are abandoned but instead wisely discussed. I was rather less convinced that a change in diet has much effect on excessive wind—if only it was that easy! In some areas, this section overlaps with the British National Formulary (BNF). For example, the different treatment protocols for *Helicobacter pylori* are documented far more comprehensively in the BNF.

The second section is an A to Z of all gastroenterological and hepatological conditions, tests and treatments. It is pretty comprehensive, although it took me some time to work out how to follow-up a patient with a colonic adenoma, my problem being the use of the word “adenoma” instead of “polyp”. Detailed recommendations on follow-up protocols for polyps are not provided, but, given the proliferation of guidelines from numerous national gastroenterology societies and bodies, this is inevitable. I looked up some small print problems I have had in my own clinical practice recently. The chapters on solitary rectal ulcers and gastrointestinal stromal tumours are well done. The association of microscopic colitis with proton-pump inhibitors was not mentioned in an otherwise good summary. Gastroparesis does not seem to be covered in this book at all. Coverage of rare diseases is important in books such as this because it is exactly these conditions that catch young clinicians out and such patients often turn up on hospital wards and have lengthy inpatient stays.

There is a short section on drugs used in gastroenterological and hepatological practice. This is brief and punchy, giving the indications, mode of action, dosing regimens, contraindications, side effects and clinical practice points. This duplicates almost exactly information in the BNF, but is much more user friendly and it is easier to find the drug of interest.

The last section deals with gastroenterological and hepatological emergencies. It covers the acute abdomen, diarrhoea, liver failure, gastrointestinal haemorrhage, swallowed foreign bodies, oesophageal obstruction and rupture. There is certainly more than enough information to get a sick patient through the night and a sensible management plan established, which is exactly what the junior doctor wants. The section is also useful for senior clinicians as it includes prognostic scoring systems such as the Rockall Scoring system for upper gastrointestinal bleeding, which can be difficult to remember if one is not using them all the time.

Overall, this is an excellent book taking a nonsense and sensible approach. Most topics are easily found and short enough to be read in less than 10 min. I shall certainly be recommending it to my own junior staff, both for their own benefit and also to remind myself of that annoying fact I've just forgotten!

Alastair J M Watson

The clinician's guide to pancreaticobiliary disorders

Edited by Gregory G Ginsberg and Nuzhat A Ahmad. New Jersey: Published by Slack Incorporated, 2006, pp 400. ISBN 1-55642-694-1

Ginsberg and Ahmad from Philadelphia have edited a compendium on pancreaticobiliary disorders within the Clinician's Guide series. Overall, this is a concise book and makes for good reading. The referencing is somewhat inconsistent from chapter to chapter. Sometimes citations are extensive, and sometimes chapters are rather short on direct references to statements made in the text. Some chapters like chapter 1 recommend further reading instead, whereas others such as chapters 11 and 2 are well referenced.

At the start of the book, congenital abnormalities of the pancreas, such as pancreas divisum, are outlined, and guidelines for interventional therapy are given. Chapter 2 on gallstones and gallbladder disorders is detailed on the pathobiology of gallstone formation. Some facts are repeated in Chapter 3 on choledocholithiasis, which also contains the technical intricacies of various types of sphincterotomy. Unfortunately, no reference is provided for the indicated 25% late complication rate after endoscopic sphincterotomy, a proportion I regard as very high. In Chapter 5, diseases of the ampulla of Vater sphincter of Oddi dysfunction are reviewed in a very pragmatic and helpful way that includes examples like the benefits of using the Milwaukee classification in clinical practice. This chapter also points out where additional randomised multicentre trials would be needed. Chapter 6, dealing with cholangiocarcinoma, goes into detail on stem placement and surgery, but not on chemotherapy or radiation therapy.

Chapter 8 on acute pancreatitis gives a very good overview. The Marshall Score cited should currently be replaced by the Sequential Organ Failure Assessment score. The extensive tables on medication-induced pancreatitis are very useful, but they do not provide the degree of evidence required for each drug, such as whether the information is from a single case report or from challenge evidence or from multicentre controlled trials. Although the previous review on the pathogenesis and pathophysiology of gallstone formation in an earlier chapter was excellent, that for pancreatitis is missing. Prophylaxis for endoscopic retrograde cholangiopancreatography-induced pancreatitis is not endorsed, and the approach outlined here is very practical. Also, the approach to CT scan indications in acute pancreatitis is based on personal experience, straightforward and to the point: “The patient usually had one (CT) before we see him. If he doesn't we don't perform one but allow the clinical course to determine the indication.”

I only disagree with the authors' assumption that C-reactive protein levels should be “relegated to the realm of research tools”, since it is widely available and used both in the US and Europe to determine the severity of pancreatitis outside of imaging techniques. Where the chapter sees great promise (trypsinogen activation peptide), the assay is no longer commercially available and was discontinued a few years ago. The chapter is very up to date and practical as far as the use of antibiotics in

necrotising pancreatitis and the use of parenteral nutrition are concerned. The statement on page 169 that “all would agree that an NPO (nil per mouth) status is mandatory to put the pancreas to rest and allow healing to proceed” is now utterly obsolete. Endorsing enteral nutrition over parenteral nutrition in the absence of ileus, on the other hand, is now evidence-based clinical practice. If the authors of the pancreatitis chapter do not use severity scores or C-reactive protein level, the question remains as to how do they follow their own recommendation to determine the severity of pancreatitis other than by means of a CT scan.

Chapter 9 on chronic pancreatitis gives a good overview on pathophysiology and pathology. Unfortunately, the concepts regarding tropical pancreatitis are completely outdated, since neither Cassava nor selenium aetiology hypotheses have stood the test of scientific inquiry, and serine protease inhibitor Kazal 1 mutations are found in 50% of patients with tropical pancreatitis. The statement that “furthermore myriad mutations have been plausibly linked to pancreatitis” is incorrect; also, only a single trypsinogen mutation for hereditary pancreatitis (R117H) is mentioned in this chapter and denoted according to the old chymotrypsinogen classification that was dropped a decade ago (the mutation is now referred to as R122H). The chapter states the varying and conflicting hypotheses about the underlying mechanisms of hereditary pancreatitis as though they are based on experimental evidence—which they are not. The chapter states further that there is a plethora of non-invasive, indirect tests of pancreatic function that do not require passage of collection tubes. However, it lists only five of those, of which two are no longer commercially available. An advantage of the chapter is that it is extensively referenced. Chapter 11 on solid pancreatic tumours has unfortunately no section on chemotherapy or adjuvant therapy. A review on intraductal endoscopic ultrasound appears in this chapter on solid tumours rather than in the preceding chapter on pancreatic ductal complications and their diagnosis. Chapter 12 on pancreatic cystic lesions includes intraductal papillary mucinous neoplasia and is very up to date. Table 11-1 and Table 13-1 are, however, identical. The imaging of the pancreaticobiliary system as covered in Chapter 15 is immensely readable, Chapter 16 on MRI has excellent photo quality and Chapter 17 covers interventional radiology.

Overall, I found this book concise, mostly up to date, very readable and sometimes even entertaining. A more detailed coverage would be found in existing text books. The authors Ginsberg and Ahmad should be congratulated on editing this practical clinician's guide.

Markus M Lerch

CORRECTION

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G D De Palma, M Rega, P Ciamarra, *et al.* An unusual cause of upper gastrointestinal haemorrhage (*Gut* 2005;54:343, 373). In this article the third author's surname appears incorrectly. The correct spelling is Ciamarra.