where there are appropriate facilities, in all patients with recurrent variceal haemorrhage.

Intrahepatic portosystemic shunts were first created experimentally by Rosch in 1969.¹ The first human studies were reported in 1982 by Colapinto *et al.*² Interest in the technique has been revived by the introduction of metal stents to maintain shunt patency.³ In this procedure a suitable hepatic vein is selectively cannulated through an internal jugular vein approach, and hepatic venography is performed. Under ultrasound control a needle is advanced into a portal vein branch and the track is dilated with an angioplasty balloon. A metal stent is then deployed across the tract to maintain patency. Decompression of the portal tract is immediate.

La Berge *et al.*⁴ have suggested that TIPS is of benefit in patients with acute variceal haemorrhage, and is associated with an acceptable morbidity and mortality. It offers immediate control of bleeding, and rebleeding is uncommon as long as the shunt remains patent. Patency at two years is up to 80%.⁵ It can be performed, under general anaesthetic or with sedation, on very unfit patients. The reported risk of encephalopathy is low and depends on shunt size.⁶ Surgical access for subsequent hepatic transplantation is not impeded by previous TIPS.

The role of TIPS needs to be defined by prospective studies and longer follow up. Comparative studies are needed with both traditional portosystemic shunts and with endoscopic sclerotherapy. At present we offer TIPS to patients who have rebled despite variceal injection sclerotherapy and before performing either oesophageal transection or a surgical portosystemic shunt. If further studies confirm initial promise it is possible that TIPS may become the treatment of choice for the management of complicated portal hypertension.

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Reply

EDITOR, — Although our leading article did not really concern the technical details of portosystemic shunt construction we were interested in the results of Pugh and Sissons who have used the new procedure of TIPS. We have also been impressed with this technique, which was recently introduced into our hospital by Dr J Karani, and it has provided us with a valuable

addition to the range of procedures that are necessary for the comprehensive management of all types and complications of portal hypertension.

TIPS is, of course, not applicable to the management of patients with extrahepatic portal hypertension or to infants and children. The technique may also fail in approximately 10% of patients because of unusual intrahepatic anatomy, particularly in the distribution of the hepatic veins. Contraindications also include severe coagulopathy, polycystic liver disease, and hepatic neoplasms.¹

TIPS is still under evaluation but we believe that the guidelines for its use should not differ appreciably from those enumerated in our article for more conventional surgical portosystemic shunting. The risk of post shunt encephalopathy, clearly documented in the early days of shunt surgery, remains a significant hazard in the patient with cirrhosis and has already been recorded in 10-20% of patients who have been treated with an intrahepatic shunt.¹ We are convinced that TIPS should not displace injection sclerotherapy as the primary treatment for bleeding oesophageal varices except, perhaps, in the case of a bleeding adult patient with cirrhosis awaiting transplantation.

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BOOK REVIEWS

The puzzle people: memoirs of a transplant surgeon. By Thomas E Starzl. (Pp 364; illustrated; \$24.95.) Pittsburgh: University of Pittsburgh Press, 1992.

Dr Thomas Starzl is a living legend, a man who has made outstanding contributions to transplant surgery by the continuous one directional pursuit of each objective as it came into his focus. He has been successful in overcoming both surgical and immunological difficulties in organ grafting. He has a powerful, mesmeric personality, and an almost unbelievable capacity for hard work.

The writing of an autobiography usually marks the end of an active career but this is certainly not the case for Dr Starzl. Although no longer operating, he is still actively engaged in research and has recently directed the two transplant operations from baboon to man, and he continues to produce more papers in scientific journals than any other writer. His father was a journalist and this may have influenced Starzl in his delight and facility in the use of words. The book is well written and entertaining both for the medical and lay reader as would be expected by someone who has achieved such eminence in his profession. Starzl's early scholastic record was excellent and he achieved outstanding grades in all the subjects that he took.

The story responsible for the title *The puzzle people* is centred on Starzl's life work in transplantation, particularly of the liver and

this is appropriate as Starzl performed the first liver graft in man in 1963. Despite terrible results with the early clinical cases, Starzl persisted and eventually succeeded with good results following the introduction of the immunosuppressive drug cyclosporin. Liver transplantation has been accepted as the main treatment option for those with end stage liver disease and the results are constantly improving. The longest survivor in the world is a patient of Dr Starzl's, now 23 years since her operation and for the last 18 years she has had no immunosuppressive drugs. The patients are 'puzzle people' in the sense that they contain pieces from other individuals. As far as the doctors and nurses who look after the patients are concerned, the challenge has always been severe and they still understand only part of the story of what causes graft rejection and how it can be controlled.

Until he was head of his own unit, Dr Starzl did not seem to stay anywhere for very long, probably because of his exceptional abilities that frightened off people with less capacity for hard work and dedication, which would apply to almost everybody else in surgery. It is not surprising that with a life so specifically targeted, normal family relations were not easy to fit into the work programme and some aspects of this are covered in the book. In the main, however, it is a story of facing and overcoming enormous surgical hurdles and well orchestrated attempts of hospital and university administrators to block specifically his progress.

To the rest of the transplant community, Dr Starzl is an innovator with a keen intellect, an almost photographic memory and a determination to succeed. He worked for years in the laboratory, developing a surgical method of transplanting the liver in the dog. Independently, Dr Moore in Boston was pursuing the same aim. Both achieved success with somewhat different technical solutions to the physiological disturbance that follows clamping the portal and caval circulations. To remove the liver from the recipient it is necessary to obstruct the portal and inferior caval veins, which causes a rapid and damaging rise of blood pressure in the dammed up circulation. The bowels become congested and cyanosed and when relapsed into the circulation, the acidic stagnant blood, high in potassium ions, is likely to cause cardiac arrest. Both Starzl and Moore decided that orthotopic liver transplantation could not be possible unless blood was shunted from the portal vein and inferior vena cava to the superior caval drainage system, thus decompressing the clamped vessels when the recipient liver was removed and the donor liver was sewn in place. It was only after successful decompression that survivors with liver grafts could be studied. At the same time, Starzl was one of the early pioneers of kidney transplantation working in Denver with Dr Waddell.

I first met Dr Starzl in 1961 when he was recording multiple observations in kidney transplant patients using a large flow sheet. This longitudinal analysis of the progress of patients proved to be extremely valuable and has now been adopted by all transplant units all over the world. He was enthusiastic in the use of corticosteroids in addition to azathioprine as the main method of immunosuppression used at that time and the programme from Denver was very active with large number of cases and good results.

Starzl is a man with extremes of enthusiasm; at one time for smoking cigarettes in prodigious numbers so as to form huge pyramids of stub

ends on the table when he was working at his charts and manuscripts. He then practised more healthy pursuits of cycling, skiing, and 'go-go' dancing. In none was his approach ordinary – it has always been quite exceptional. He visited me once in Cambridge during his bicycle phase, cycling non-stop from London according to a strict time schedule. Arriving at a convention in Chicago with his co-workers, there was fairly prolonged discussion with a map as to which restaurant to choose for dinner, Starzl insisted on a restaurant which was way out in the suburbs and when he was asked why he wanted to go so far, he explained that this would give the best chance of a worthwhile bicycle ride. He carried his bicycle on to the plane on all his travels so as not to miss an opportunity for bicycling.

This is a puzzle to many of us who work in transplantation – how patients' lives can be saved by transplantation and their attitude to life, their organs, and the donor whose family they usually do not know. These are important factors of transplantation which are considered in Starzl's book.

From my remarks in this review it will be clear that most surgical fellows have found working for Dr Starzl not easy but they have learned immensely, not only about transplantation but also how tough it is at the top.

SIR ROY CALNE

Manual of gastrointestinal procedures. Edited by D Drossman. (Pp 304; illustrated; \$44.) New York: Raven Press, 1992.

For those who are occasionally diverted from the path of true clinical rectitude by the cultivation of arcane research interests, it is often something of a shock to find that the fellow sages whose company we enjoy at abstruse symposia in distant places also lead double lives. Doug Drossman, with dual expertise in gastroenterology and psychiatry, has a towering reputation in the study of the psychosocial and epidemiological aspects of functional bowel disorders; as these are problems that make few demands on technical skills in gastroenterology, it is all the more surprising to find him as editor of a manual on practical procedures in gastroenterology. Knowing him, it is less surprising to find that this book is very well done indeed. The 40 chapters are grouped into five sections with the helpful titles of 'Tubes', 'Needles', 'Diagnostic Endoscopy', 'Therapeutic Endoscopy', and 'Procedures for Pediatric Patients' preceded by a chapter on 'The Procedure Unit'. The latter makes it clear that this is a transatlantic publication; advice that the allotted space 'should include the following: . . . Staff information space with lab information and computer terminals . . . Staff education room and library with video monitors . . . Conference room and lounge space with a refrigerator . . . is the stuff of fantasy for most United Kingdom gastroenterologists. But, thereafter, the territory is more familiar, and the whole range of gastroenterological manipulative procedures are described succinctly but clearly, with appropriate advice on how to overcome difficulties, and, where appropriate (as in manometry) on the interpretation of results.

The book is paperback rather than pocket sized, but ring binding ensures that it stays open where you want it so that you could, if you had to, leave it open for easy reference while you insinuate scopes, tubes, and guide wires into appropriate orifices. It isn't a book that

needs to be carried around, but, in a gastroenterology unit, it would be an excellent resource which would be equally valued by trainee physicians, nursing and ancillary staff, and medical students. The fact that it is in its third edition is testimony both to its past popularity and the rapid advances that are made in this field. In his chapter on laparoscopy, Dr Lesesne remarks that 'Surgeons have recently expanded on the use of this technique by introducing laparoscopic cholecystectomy', but even within three months of publication, the last four words should be amended to ' . . . by the laparoscopic abolition of all elective abdominal surgery'. None the less, it is largely up to date, and should prove very useful.

D L WINGATE

Handbook of total parenteral nutrition. By John P Grant. (Pp 368; illustrated; £22.) Philadelphia: W B Saunders, 1992.

The development of nutrition as a clinical specialty continues steadily, fuelled by the increasing awareness of the potential for techniques of artificial nutritional support. The inauguration of the new British Association for Parenteral and Enteral Nutrition in December last year has highlighted the need for the multidisciplinary team approach, but which can be so difficult to achieve. This new addition of Grant's book, published some 10 years after the first, is therefore timely indeed.

After a short historical chapter, the second emphasises the team approach. American teams are bigger than their United Kingdom counterparts and the chapter might tempt us to question whether our all too modest expectations for staffing here are really in the patient's best interests. The third chapter on nutritional assessment by body compartment analysis appropriately deals mainly with anthropometric techniques widely available for use at the bedside but does not neglect the less available, more expensive research orientated approaches – though DEXA scanning and underwater weighing surprisingly do not feature. The effects of undernutrition on function, particularly of (respiratory) muscle, are discussed in the context of nutritional assessment in the next chapter. The section on nitrogen balance could have been fuller with advantage – and the clinical problems of its measurement could have been approached more practically. The next chapter on patient selection is a useful but inevitably selective guide to some of the published works though it quotes over 200 references.

Chapters 7–10 deal most usefully with the day to day organisation of total parenteral nutrition, the insertion of lines, maintenance of asepsis, the writing of prescriptions, and the compounding of solutions. Chapter 11 is on the management of the patient with special needs, liver and renal disease, the catabolic patient, and the blending of tailored support to abnormal metabolism. The use of insulin, growth hormone, glutamine, and other adjuncts are briefly, though not very satisfyingly, discussed.

Chapters on complications and deficiency syndromes lead appropriately to vitamin requirements. The book ends with sections on the use of peripheral intravenous feeding and home care.

All in all this is a good book, clearly written, attractively presented, and of a manageable length. It must rank among the best as a specialist introduction to the field. In concen-

trating on total parenteral nutrition it ignores enteral feeding and so runs the risk of erroneously giving the impression that most nutritional support is intravenous.

J POWELL-TUCK

Cholecystokinin antagonists in gastroenterology. By G Adler, C Beglinger, eds. (Pp 233; illustrated; DM 148.) Heidelberg: Springer-Verlag, 1991.

There are now several orally active antagonists of the cholecystokinin (CCK-A) and gastrin/cholecystokinin (CCK-B) receptors of the stomach, gut, and brain.

This small book is edited by two distinguished Swiss physicians who have particular interest in their effects in humans. The content, however, is comprehensive because the various chapters are each written by the appropriate expert, resulting in a source of information and references, which will be of value to scientists and medics with an interest in the area. There are several applications in the control of gastrointestinal and pancreaticobiliary secretion and motility. Also, interestingly, blockade of CCK-B receptors in the brain might be useful in the treatment of anxiety and panic.

There are four sections: (1) biology of CCK; biochemistry, distribution, receptors, effects, etc; (2) the development and chemistry of CCK receptor antagonists; (3) the physiological effects of these agents on animals and man; (4) potential clinical applications of CCK receptor antagonists.

Of course, publications of this sort vie with journals, 'Medline', etc, as sources of up to date information, and competition is keen when the action is fast: the CCK-A and -B receptors were cloned after the book was published. In practice these advances do not diminish the usefulness of the collection of first class reviews brought together here.

J CALAM

Probiotics: the scientific basis. By R Fuller, ed. (Pp 398; illustrated; £49.) London: Chapman and Hall, 1992.

We are familiar with the important role of antibiotics in the control of infection. We are also aware that there can be problems with the treatment of digestive tract infection and of the serious side effects that may follow attempts at such treatment (for example, pseudomembranous colitis, candida overgrowth, *Staphylococcus enterocolitis*). These side effects result from the effect of the antibiotic on the colonisation resistance of the normal flora – the main mechanism for prevention of gut infection. With the growing trend towards preventive medicine, why not support this colonisation resistance by the use of probiotics – promoters of the natural defensive mechanisms in the gut?

Probiotics are widely used in animal husbandry but not in the prevention of human disease. This is partly because of the wealth of anecdotal, mystical or mythical data in circulation, which have given the subject a bad image. The title of this book admirably states its aims. The editor has a long and creditable experience in the field, and has assembled an impressive group of contributors to help him. The first nine chapters deal with the background, and the theoretical bases for believing that probiotics should help to prevent disease. The next