would like to add one more consideration. I have recently observed two cases of post-anaesthetic jaundice in which halothane was employed. On careful investigation these were proved to be due to Gilbert's disease (congenital hyperbilirubinaemia). Starvation precipitates icterus in these cases, causing a raised plasma unconjugated bilirubin level, usually within 48 hours. The incidence of Gilbert's disease may be as high as 5% and it should therefore be a consideration in the differential diagnosis of cases of post-anaesthetic jaundice.—I am, etc.,

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Gonorrhoea in Obstetrics and Gynaecology

SIR,—Dr. R. S. Morton's letter (27 July, p. 253) raises some very interesting and important points.

The approval by the Royal College of Obstetricians and Gynaecology of a post in venereology during the elective year preceding the M.R.C.O.G. examination is most welcome, as it would enlighten the holders of such a post that venereology is a much more complex subject than is generally thought. However, I fail to follow Dr. Morton's reasoning that "the emphasis in the specialty of venereology is nowadays very much on what might be called medical gynaecology" and that the "future lies with holders of the M.R.C.O.G." If this were true it would have a disastrous effect on the recruitment of junior medical staff. While solving an immediate situation, it would in the long term aggravate a condition which is becoming more and more acute. In my opinion the specialty of venereology is in danger of collapse unless we sell the image of the specialty as it really is—one of importance and not one to be ignored, as is shown by the increasing number of patients and the more complex diagnostic tests.

A major factor in the deterioration of recruitment to the specialty is outlined in the letter from Dr. S. Mehta and others (14 September, p. 690). Though they did not name it, venereology is in the very worst position in that few if any consultants receive more than the basic salary. If this cause were removed it would obviate the necessity for back-door recruitment.—I am, etc.,

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Plagiarism in Medicine

SIR,—Professor Douglas Hubble's Personal View (7 September, p. 623) has proved too great a temptation for me to resist confessing the "rare excitement" I felt when I thought I was the first to find that Lord Lister had not introduced antiseptic surgery. While preparing my M.D. thesis I read that of the French physiologist Paul Bert, which was published in 1863. While considering the influence of various agents on the survival of skin grafts he wondered if "*la présence d'acide phénique si propre à arrêter les transformations putrides*" offered an advantage or disadvantage.¹

To avoid the accusation that "eagerness to declare" my discovery might shamefully distort [my] historical judgement² I looked up Lister's original communication³ in which he stated that "in the course of the year 1864 I was much struck with the account of the remarkable effects produced by carbolic acid upon the sewage of Carlisle . . . and the applicability of carbolic acid for the treatment of compound fractures naturally occurred to me." Six months later, in a leading article, the *Lancet*⁴ revealed that Dr. Lemaire of Paris had already published a book on the use of carbolic acid in medical and surgical diseases but credited Lister with having made the agent extensively known in this country. This provoked a spirited reply from Lister⁵ who, to quote Professor Hubble "introduced some explanation, which, in his own view at least, diminished the fault." He admitted that he did not claim the introduction of carbolic acid to surgery but claimed originality "for its employment with the view of protecting the reparatory processes from disturbance by external agency." A broadside was then delivered by Sir James Young Simpson in the form of an article⁶ giving very detailed evidence that "Mr. Lister has been most undoubtedly preceded by other authors in all his leading theories and uses in connexion with this subject." The earliest use of carbolic acid that he quoted was as a dressing to wounds by Cruveilhier, Follet, and Rigault in 1859, followed by the treatment of compound fractures by MM. Darrican and Petit in 1860. After this Lister retired as gracefully as possible "having already endeavoured to place the matter in its true light without doing injustice to anyone."⁶

The fact remains that Lister had claimed to have introduced carbolic acid to "protect the reparatory processes from external agency" in 1864, while in 1863 Bert was of the opinion that *acide phénique* was essential to arrest putrid transformation. I think we may safely say with Sir Walter Langdon-Brown that "while there was no real claim to priority, there was no wilful plagiarism with intent to deceive."—I am, etc.,

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- 2 Lister, J., *Lancet*, 1867, 1, 326.
- 3 *Lancet*, 1867, 2, 412.
- 4 Lister, J., *Lancet*, 1867, 2, 444.
- 5 Simpson, J. Y., *Lancet*, 1867, 2, 546.
- 6 Lister, J., *Lancet*, 1867, 2, 595.

Sexual Dysfunction Due to Methyldopa

SIR,—It is now widely held that methyldopa is a drug which can control systemic hypertension with relatively few unwanted side effects. Disorders of sexual function are known to occur, but apart from reports saying that they are "rare"¹ or met with "seldom"² or "infrequently"³ their exact incidence has been poorly documented. Papers reporting a 2% incidence of methyldopa-induced impotence have been published⁴ as well as others which report no significant change in libido, potency, or ejaculation.^{5,6} We are of the opinion that disorders of sexual function occur in approximately one-third of males so treated and append the following information.

Twenty-seven male patients being treated

with methyldopa for essential hypertension were seen in our medical outpatient clinic at the Veterans Administration Hospital, Northport, New York, in the month of July 1974. These patients were taking 500-2,000 mg a day in divided oral doses and were aged 43-64 years. Close interrogation revealed that seven were experiencing some disorder of sexual function which had started within a few days of commencing therapy. These included a decrease in libido, an inability to maintain an erection, and difficulty in ejaculation. Within two weeks of discontinuing the drug and instituting a regimen of propranolol and hydralazine these undesirable side effects had disappeared. Sexual dysfunction was not noted in a comparable group of 22 hypertensive males treated with a thiazide diuretic alone.

In view of the fact that aberrations of sexual function were not related to age or daily dose of the drug we would urge physicians to inquire specifically about the side effects experienced by patients being treated with methyldopa.—We are, etc.,

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- 1 Wilson, G. M., *Practitioner*, 1965, 194, 51.
- 2 Bock, K. D., von., *Zeitschrift für Allgemeinmedizin*, 1970, 46, 1287.
- 3 Evans, B., *Practitioner*, 1963, 191, 96.
- 4 Johnson, P., et al., *British Medical Journal*, 1966, 1, 133.
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Swelling of Arm in Patients with Arteriovenous Fistula

SIR,—We were most interested in the recent case report by Drs. J. Göthlin and E. Lindstedt (7 September, p. 629) and have recently completed formal studies of hand volume in patients on intermittent dialysis using an arteriovenous fistula. We found that the volume of the dominant hand was 5.1% greater than that of the non-dominant hand ($P < 0.001$) in 28 normal subjects but that the volume of the non-dominant (fistula) hand was greater in age- and sex-matched male (18%, $n = 23$, $P < 0.001$) and female (21%, $n = 5$, $P < 0.01$) dialysis patients.

We found that 23 out of 36 patients developed pain, numbness, or paraesthesiae on dialysis, these symptoms being confined to the distribution of the median nerve in the fistula hand. In six patients with severe symptoms the volume of the fistula hand increased by 15% on dialysis ($P < 0.05$), whereas the volume of the non-fistula hand increased by 4% ($P > 0.10$). Predialysis venous pressure in the dorsum of the fistula hand was 21 ± 4 cm H₂O higher than in the non-fistula hand. Because of severe symptoms two patients have required carpal tunnel decompression.

We conclude that oedema of the fistula hand is common in dialysis patients, though it may be undetectable on physical examination. The oedema is probably a consequence of high venous pressure and exacerbated by immobility during dialysis. Construction of an end-to-side anastomosis

of the vein to the radial artery may be less likely to cause this complication than the side-to-side anastomosis normally performed by our surgical colleagues.

Detailed results of our studies are now being submitted for publication.—We are, etc.,

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Cost of Part II M.R.C.P.

SIR,—On scrutinizing application forms for entry to the part II M.R.C.P. (U.K.) examination I was astounded to note that the entry fee has just been increased to £60 "to cover rising cost of administration." Since in 1972 the fee was £35 this represents an increase of 71%, far outstripping the national rate of inflation over these two years. If I should be so lucky as to pass the examination then I would be accorded the dubious privilege of paying the colleges a further £30 for the diploma, making £90 in all for passing part II M.R.C.P.

Like many young doctors I find it a struggle to bring up my family, pay the mortgage, and yet remain financially solvent. Should the fees continue to escalate in this appalling manner then the financial deterrent to taking the M.R.C.P. which they will impose will mean that future aspirants to membership of the colleges will be confined to those with private means.—I am, etc.,

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Tuberculous Polyradiculitis

SIR,—An association of the Guillain-Barré syndrome with infectious agents is well documented,^{1,4} and Leneman⁵ found an association with infective disease in 638 out of 1,100 cases collected from the literature, but the fortuitous nature of this association is borne out by the non-specific pathological findings. A polyradiculitis caused by a specific infection is not unknown, however, and will produce the same neurological picture. We here report a case in which tuberculous granulomata and the tubercle bacillus were demonstrated in the nerve roots at necropsy in a patient who presented with the salient features of the Guillain-Barré syndrome.

A 10-year-old boy who had suffered from a brief febrile illness without neurological or respiratory manifestations two weeks previously was admitted to hospital with difficulty in passing urine. On the following day he developed weakness of the right leg and, a few hours later, of the left leg. The lower limbs were flaccid and areflexic, with absent plantar responses. The upper limbs showed no abnormality. He was very irritable and had generalized hyperaesthesia which made sensory testing difficult. Lumbar puncture revealed a viscid, xanthochromic fluid with a protein content of 4.5 g/100 ml and 20 lymphocytes/mm³. During the next 36 hours he developed a rapidly ascending paralysis with flaccid, hyporeflexic upper limbs. Lumbar puncture was repeated and yielded C.S.F. with a protein content of 3.5 g/100 ml and 22 lymphocytes/mm³; there were no acid-fast bacilli. His condition remained unchanged for 36 hours but the next day he developed a tachycardia and died suddenly.

At necropsy the interpeduncular fossa and the spinal cord were covered with a thick, gelatinous exudate resembling coagulated plasma. The rest of the surface of the brain appeared normal. No

Fig. 1—Section of nerve root showing tuberculous granulomata, mononuclear cell infiltrate, and swelling and destruction of myelinated nerve fasciculi with lipid phagocytes.

Fig. 2—High power field of nerve root section.

abnormality was seen in coronal sections of the brain and spinal cord other than the subarachnoid coagulum enveloping the brain stem and spinal cord. In histological sections a few small tuberculous granulomata were seen in the fibrinous exudate in the interpeduncular and spinal subarachnoid space. The basal and spinal leptomeninges were sparsely infiltrated with mononuclear cells, mostly lymphocytes. The anterior and posterior nerve roots in the cervical, thoracic, and lumbosacral regions were swollen and infiltrated with mononuclear cells, mostly lymphocytes. Many of the nerve roots showed tuberculous granulomata (some with caseation) and swelling and destruction of myelinated nerve fasciculi with lipid phagocytes in relation to them (see figs). Small perivascular collections of lymphocytes and swelling and vacuolation of some ganglion cells were seen in the posterior root ganglia. Acid-fast bacilli, morphologically *Mycobacterium tuberculosis*, were seen in some nerve roots and in the exudate in the interpeduncular fossa.

There was no evidence of an inflammatory process in the peripheral nerves examined. Wallerian degeneration of axons and myelin in scattered fibres in peripheral nerves was seen in sections and teased nerve preparations. No evidence, macroscopic or histological, of tuberculosis or other disease was seen in the lungs, heart, liver, kidneys, spleen, lymph nodes, or adrenals.

The occurrence of radiculomyelopathy in tuberculous meningitis is not well recognized, but has been reported by Wadia.⁶ In the present case differential involvement of the nerve roots by tuberculous granulomata was unequivocally demonstrated and accounted for the rapid centripetal spread of paralysis simulating the Guillain-Barré syndrome. The possibility of such an association should evidently be borne in mind in the differential diagnosis of a puzzling

radiculopathy in communities where tuberculous meningitis is not uncommon.—We are, etc.,

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- 1 Haymaker, W., and Kernohan, J. W., *Medicine*, 1949, 28, 59.
- 2 Miller, H., *Proceedings of the Royal Society of Medicine*, 1956, 49, 139.
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- 4 Channugan, D., and Waniganetti, A., *British Medical Journal*, 1969, 1, 95.
- 5 Leneman, F., *Archives of Internal Medicine*, 1966, 116, 139.
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Hernias in Children

SIR,—In your leading article on this subject (31 August, p. 540) I was surprised that no mention was made of the Edinburgh skein-of-wool treatment. If this method is used by intelligent parents a cure can be effected since, as you yourself say, the tendency is for the processus vaginalis to close spontaneously.

An eight-stranded loop of knitting wool, long enough to go round the pelvis and perineum, is placed around the pelvis with the index finger through the loop of one end and holding the hernia in. The other end is looped through this sufficiently tightly to keep the hernia in and then taken round the perineum to be looped into the wool at the back.—I am, etc.,

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Larrey and Débridement

SIR,—Mr. D. H. Patey's letter on débridement (14 September, p. 686) makes it quite clear that this procedure was originally only an opening up of the wound. It was employed in this way especially in the first world war in order to gain better access for antiseptics. Deliberate excision of damaged tissue followed more or less accidentally as a natural extension of débridement only towards the end of the war.

Primary excision of wounds as a deliberate operation instead of débridement was first described by Milligan in 1915.¹ In this article Milligan described the modern operation of wound excision and emphasized that removal of damaged tissue is far more important than the instillation of antiseptics. His paper was based on eight months' experience of war wounds so that he must have employed the operation almost from the outbreak of war. This remarkable article was years ahead of its time. It occupies only one half-page of the *B.M.J.* and it contains all the essentials of the modern operation. I have found only one reference² to this classic article and it has been sadly overlooked, but it establishes Milligan as the pioneer of primary excision of wounds.—I am, etc.,

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- 2 Downes, R. M., *Journal of the Royal Army Medical Corps*, 1936, 67, 381.