treatment of wounds. Dr. Richardson has, however, fallen into the error of regarding débridement as carried out by Larrey with the procedure as now practised. Thus he describes (p. 13) Larrey's practice in gunshot wounds as "... excising all dead and dying tissue and removing all foreign bodies from a wound—a procedure known as débridement." A reference to Larrey's *Clinique Chirurgicale Exercée Particulièrement dans les Camps et les Hôpitaux Militaires depuis 1792 jusqu'à 1829* reveals that this statement, inaccurately describes his practice. His primary treatment for wounds not requiring amputation was *pansement*, a technique of careful bandaging which kept the dressings in place until they spontaneously separated many days, and sometimes weeks, later, and an anticipation of Trueta's practice in the Spanish Civil War.

Larrey's primary use of the verb *débrider* is with the meaning of "to incise." Thus in volume 1 page 54 he writes: "*Si les plaies d'armes à feu sont accompagnées d'hémorragie, il faut nécessairement les débrider pour mettre les artères à découvert et en faire la ligature. . .*" Later he uses it as an extension of its literal sense of "to unbridle" (Fr. *bride* bridle) to refer to the division of actual or potential constricting bands. Thus for deeper wounds which extend to "*les parties charnues et aponévrotiques*" one must divide "*des brides propres à produire l'étranglement*" (p. 55). He goes on to say that wounds in regions where there are neither muscles nor aponeuroses "*ne doivent pas être débridées*" except to ligate arteries. It is true that he says (p. 57) that in deep wounds with fragmentation of bone one should remove separated fragments "*dont on ne peut espérer la soudure avec le reste de l'os*," but this is clearly because they are useless in the healing process.

Larrey did establish the importance of one aspect of débridement, the division of constricting aponeurotic tissues. The other, the removal of tissue debris serving as a culture medium for micro-organisms, had to await the surgical application of modern bacteriology and pathology.—I am, etc.,

DAVID PATEY

Hythe, Kent

Infections in Asplenic Adults

SIR,—Dr. L. E. Ramsey (27 July, p. 254) writes of the susceptibility of asplenic adults to infection. I must say that in some 40 years' experience I have not found, with one possible exception, an increased susceptibility to infection among asplenic adults. In 1935 I reported¹ a follow-up for an average of eight years of 100 adults in whom the spleen had been removed for rupture (the spleen otherwise being normal) and no increased rate of infectious disease could be found. It has later been suggested that splenectomized persons may be more liable to contract babesiosis of the brain. Of this I have no experience. My original studies in this matter had to do with the incidence of cancer in splenectomized persons, but I could not find any evidence of an association.²—I am, etc.,

E. ASK-UPMARK

Uppsala, Sweden

¹ Ask-Upmark, E., *Svenska Läkaresällskapets Förhandlingar*, 1935, 61, 197.

² Ask-Upmark, E., *Medical Masqueraders*, Stockholm, Scandinavian University Books, 1969.

Amitriptyline Poisoning in Childhood

SIR,—Goel and Shanks¹ have called attention to the increasing incidence in children of poisoning by tricyclic antidepressants. Meadow and Leeson² described the problems in managing poisoning from delayed-release tablets (Debendox). We report here a case of accidental poisoning due to a sustained-release form of amitriptyline.

A 5-year-old boy was admitted to hospital at 2.30 p.m. Three and a half hours before then his mother had noticed his gait to be reeling and had discovered that he had ingested four 50-mg tablets of orphenadrine hydrochloride (Disipal) and an unknown number of 50-mg capsules of Lentizol (amitriptyline), which contains a pellet of the drug in a form which delays liberation of the active constituent. On arrival he was disorientated, agitated, and incoherent. His pupils were fixed and dilated and his tendon jerks very brisk. He was subject to episodes of purposeless screaming and thrashing about of his body, which hindered assessment. His temperature was 37°C, blood pressure 120/80 mm Hg, and pulse rate 120/min (before therapy). He was sweating profusely. There was no cyanosis or other evidence of respiratory depression. Intramuscular paraldehyde 4 ml was given to facilitate gastric lavage. No identifiable capsules or pellets were retrieved. His bladder was catheterized in anticipation of urinary retention. We treated him as we do children poisoned with delayed-release tablets—that is, oral purging and colonic lavage. Magnesium sulphate 5 g was left in the stomach after gastric lavage and was subsequently given orally two-hourly. Enemata of soap and water and magnesium sulphate 65 g were given alternately half-hourly for six hours. Further sedation was required at 11 p.m. and thereafter his clinical condition slowly improved. Continuous cardiac monitoring showed only a persistent sinus tachycardia. Recognizable pellet fragments were recovered in the rectal effluent 14 hours after the start of treatment. The boy had completely recovered 36 hours after admission.

This is the first case we have seen of a child poisoned with this amitriptyline preparation. The manufacturers have had no other reports to date. This may be partly because it is not prescribed as often as shorter-acting formulations. In particular, we have not known of it being given for enuresis. The dose of amitriptyline associated with severe symptoms is said to be 20 mg/kg.¹ This child would have had to have taken only six capsules to receive that dose. His mother did not know the exact number taken but thought that the bottle had been "almost full." Our treatment was aggressive because of previous experience in this unit.² We thought it justified in this case because of the difficulty of treating amitriptyline poisoning once the drug has been absorbed, and it seemed imperative to try to remove as much unabsorbed material from the gut as rapidly as possible.—We are, etc.,

TIMOTHY CHAMBERS
A. D. KINDLEY

Leeds Children's Poisons Centre,
Seacroft Hospital,
Leeds

¹ Goel, K. M., and Shanks, R. A., *British Medical Journal*, 1974, 1, 261.

² Meadow, S. R., and Leeson, G. A., *Archives of Disease in Childhood*, 1974, 49, 310.

Lawn Mower Injuries

SIR,—May we add to the interesting letter from Dr. J. R. Hulme and Mr. A. R. Askew (13 July, p. 113) by relating the following case, which occurred last year. It illustrates a further complication resulting from such injuries.

The patient, a gardener aged 35 years, injured the four medial toes of his right foot

when a rotary mower he was using struck his boot. He was admitted to hospital where debridement of the wounds, appropriate wiring of his toes, and suturing of tissues were carried out. A first dose of tetanus toxoid and courses of cloxacillin and ampicillin were given. After three days he was discharged home and sutures were removed two weeks later when the wounds appeared healthy. At follow-up three weeks later the vascular condition of his second right toe was poor and its amputation was planned in 10 days' time. During this interval his general practitioner intended giving him a second dose of tetanus toxoid, but at the time of his appointment he felt unwell, his neck and jaw were stiff, and he did not attend the surgery. Two days later he was much worse and he then visited his doctor, who diagnosed tetanus and arranged his immediate readmission to hospital. The second dose of tetanus toxoid was not given.

In hospital the purulent and gangrenous toe was amputated and sheep antitetanus serum and penicillin in high dosage were given. Next day severe spasms of tetanus started which rapidly increased in frequency and severity; he was transferred to the intensive therapy unit where tracheostomy was performed, curarization undertaken, and full supportive therapy initiated. He was kept paralysed for 3½ weeks. *Clostridium tetani* was not isolated from wound swabs taken at the time of amputation, but was recovered from a section of the gangrenous toe placed in a previously boiled Robertson's meat broth. He was discharged from hospital six weeks after admission, at which time the second tetanus toxoid dose was given. At no time previously had he been actively immunized against tetanus; he had received one dose of A.T.S. in 1962.

Dr. A. T. Willis made the comment that this case illustrates that a first dose of toxoid given at the time of wounding is not protective.

We thank Dr. P. A. Thorn, consultant physician, for clinical details and Dr. A. T. Willis, director of Luton Public Health Laboratory, for confirming the identity of the organism.

—We are, etc.,

R. G. THOMPSON
IAN A. HARPER

Public Health Laboratory,
New Cross Hospital,
Wolverhampton

Alliterative Anxiety about Arsenic

SIR,—Pleased at the prospect of palates partaking poison-free porcine pâté (24 August, p. 487) the cosmopolitan clientele of your columns craves clarification of the concentration of cacodylic acid in kosher cuisine.—I am, etc.,

S. K. GOOLAMALI

Newcastle upon Tyne

Pontomedullary Listeriosis in Renal Allograft Recipient

SIR,—We were most interested to read the report by Dr. J. F. Mahony and others (29 June, p. 705) of a case of *Listeria monocytogenes* septicaemia with non-meningitic pontobulbar involvement after renal transplantation. We have seen a similar case.¹ In their case the initial presumptive diagnosis was of fungal meningitis, in ours that of herpes simplex encephalitis—both not un-