holism the root is much more deep and cancerous.

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¹ Johnson AAW. *Br Med J* 1980;41 and 61.

² Kempe CH, Silverman FN, Steele BF, Droegemueller W, Silver HK. *JAMA* 1962;181:17-24.

³ Kempe RS, Kempe CH. *Child abuse*. London: Fontana, 1978.

Deaths from non-accidental injury in children

SIR,—Dr H Valman states (15 March, p 775) that 100 children a year die from non-accidental injury. In 1973 Franklin¹ made the remarkable assertion that 700 children were battered to death each year and in 1978 d'Orban² stated that six little children are battered to death each week. These assumptions concerning child deaths from non-accidental injury do not accord with the facts. Murder was defined by Lord Chief Justice Coke (1628) as "Where a person of sound memory and discretion unlawfully killeth any reasonable creature in being and under the King's peace with malice aforethought express or implied death following within a year and a day." Since 1874 the Births and Deaths Registration Act has required all deaths in the United Kingdom to be medically certified and registered. Unlawful killings are reported to the coroner. Each year the Registrar General publishes his annual statistical survey,³ from which we learn that during the present century "deaths due to homicide and injury purposely inflicted by other persons on children under five years" have progressively declined.

In 1900 the number of such deaths was 87. In 1910 it had risen to 115 (the maximum ever). Since 1915 the number of these deaths has steadily decreased. Last year the total number had fallen to 78.⁴ The total population of England and Wales during this period has increased from 19 million to 49 million. The percentage infantile homicidal deaths compared with the total population was in 1874 0.00056 and in 1979 0.00016.

Will Dr Valman tell us where 22 babies were buried without the coroner, the police, or the registrar general being told?

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¹ White Franklin A (compiler). *Non-accidental injuries to children: Tunbridge Wells Study Group report*. Meeting sponsored by Medical Education and Information Unit of the Spastic Society, 1973.

² d'Orban P. *British Medicine*. 15 August 1978:9.

³ Central Statistical Office. *Annual abstracts of statistics*. London: HMSO, 1980 et seq.

⁴ Office of Population Censuses and Surveys. *Mortality statistics: childhood and maternity 1977*. London: HMSO, 1979.

*.*We sent a copy of this letter to Dr Valman, whose reply is printed below.—Ed, *BMJ*.

SIR,—Dr Farn notes that 78 infants die as a result of inflicted injury but we rounded the figure to 100. The object of quoting an incidence was to contrast the number of cot deaths (2000 a year) with deaths from inflicted injury. This shows that if an infant is found dead unexpectedly the chance that the death is due to natural causes is about 20 to 1.

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Planned surgical admissions

SIR,—I am interested to see the article on planned surgical admissions by Mr J A Southam and Mr R W Talbot (15 March, p 808). I believe that the method they describe is more widely used than they may suspect.

I first learnt to use a unit diary for surgical admissions when I succeeded Mr Ivor Lewis at North Middlesex Hospital in 1952. I have practised this method at St Albans Hospital ever since, though I was using a very similar method before then. Only later was I able to get the diary method introduced for my patients at the Royal Northern Hospital by the enthusiasm of a former senior registrar, Mr John Dormandy.

The scheme has always been easier to administer at St Albans, where I have my unit secretary in an office alongside the consulting room. Patients for operation are appropriately entered in the diary and generally given their date for admission at the time of consultation, which obviates the need in most cases for a subsequent letter. Moreover, to avoid any last-minute problems over availability of beds for less serious cases, we generally get such patients to telephone the ward on the morning of admission lest unforeseen problems should have arisen as a result of excessive emergency admissions.

The majority of my trainees, who are now consultants, tell me that they use the same basic methods in their own hospitals. The system is not only far better for the surgical team and for the patients; it also makes planned surgical training much easier and ensures that the unit secretary is an essential feature of the hospital economy in a much more fulfilling job. I commend the system to any who may not have already used it, though I recognise that it is more difficult to implement in some places.

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Antibiotics in appendicectomy

SIR,—We wish to reply to comments made by Mr Douglas Stewart and others (15 March, p 794) on our paper on the use of antibiotics after appendicectomy (2 February, p 275). We accept his point that the wound infection rate in patients with only gangrenous appendices was acceptable at 4.5%. The busy young surgeon, who normally treats appendicitis, will readily differentiate between an inflamed appendix and one that is gangrenous, perforated, or both, but he is less likely to want to separate gangrenous from perforated appendices, where the distinction is less clear. This was the impression we obtained from our junior colleagues during the trial, although they complied fully with the protocol requirements. Hence the recommendation for cephalosporin and metronidazole together in this combined group. Mr Stewart mentions the importance of intraoperative antibiotic peritoneal and wound lavage; we are aware of this study but were not concerned to test these procedures as part of an investigation into systemic antibiotic regimens.

Mr A Kingsnorth (p 794) states that ampicillin, by being given intramuscularly as soon as the condition of the appendix was diagnosed, was disadvantaged in comparison with metronidazole given by suppository one hour before operation. Ampicillin, however, would pene-

trate the operation site well within the first postoperative hour and therefore would be active within the time limit set by the work of Burke.¹ In an attempt to reduce the septic complication rate we recommended cephalosporin because of the poor performance of ampicillin in our trial and in view of our own good clinical experience with it. A multicentre study comparing metronidazole with metronidazole and cephalosporin has been instituted.

Mr M J Kelly (p 794) will have noted that we used suppositories of metronidazole throughout our trial and that the recommendation for intravenous metronidazole fulfils the need to supply the drug rapidly after diagnosis of the state of the appendix. We recommended a certain dosage postoperatively but not that it must be given intravenously; indeed, after the first intravenous dose we give the drug by suppository until the patient can take it by mouth.

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¹ Burke JF. *Surgery* 1961; 50:161-8.

Sepsis after bowel surgery

SIR,—I enjoyed your leading article "Sepsis after bowel surgery" (29 March, p 882). I was glad that it stressed the importance of surgical technique in the prevention of sepsis in colorectal surgery. I was surprised therefore to discover no mention of the circular stapling device now used by many intestinal surgeons for low anterior resection. There is no doubt that the use of this instrument has reduced the risk of anastomotic dehiscence, which the authors rightly point out is a most important cause of secondary infection. In our own unit our overall sepsis rate remains less than 10% when metronidazole and the end-to-end anastomosis stapling device have been used for rectal cancer.

One important dilemma remains: namely, whether or not the addition of an aminoglycoside is in fact necessary when metronidazole is used. Eykyn and her colleagues¹ showed that metronidazole alone had a dramatic effect on postoperative sepsis even when the incidence of anastomotic dehiscence was quite high. We believe there is an urgent need for a trial to determine whether metronidazole alone is as effective as metronidazole in combination with either an aminoglycoside or a cephalosporin.

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¹ Eykyn SJ, Jackson BT, Lockhart-Mummery HE, Phillips I. *Lancet* 1970;ii:761-4.

Setting up a drip

SIR,—We were interested to read the article on setting up an intravenous drip (16 February, p 463) by Drs Barbara Bannister and C W H Harvard, together with the subsequent letters by Drs M Jolles, J Hart, and W G Notcutt (22 March, p 865). We also feel that more care and attention should be exercised in the selection and performance of these procedures. Poor aseptic and surgical technique may result in unnecessary pain for the patient from thrombophlebitis, subcutaneous infusion of fluids, or even skin necrosis. We should like to