44% of cases. The lapse of time in seeking medical attention ranged from several hours (42%) or several days (22%) to longer than several days (18%). Only 6% were referred immediately. Thirty-six per cent presented with symptoms other than injuries, but skeletal surveys of all these children revealed old fractures in 46% and recent fractures in 42% of cases. The presence of old burn marks (an often unrecognized manifestation) were present in 12% and bruising to the head 50%.

Our working definition of child abuse has been "inadequately or unexplained injuries," and I agree with Dr. Jackson that this is the major diagnostic feature. I would disagree with his statement, however, that the abused child is often unwanted and the youngest in the family. The evidence for this, in fact, is flimsy. Twenty-two per cent of our sample had another sibling with a history of maltreatment, and many siblings had presented previously as a failure to thrive. Only 21% of our mothers resented being pregnant and only 9% wanted an abortion.

Some of our other observations include a reluctance to admit the child to hospital even when the diagnosis is suspect. We have also found that the assumption that this is a problem which only occurs in lower social classes is erroneous. A previous history of physical abuse was found in 45% of our sample. The majority of cases were at the time being actively surpervised by the social services department. In only 10% of our sample was the child placed in care on discharge from hospital. Even when the parents are not co-operative in management there appears to be a strong tendency to rely upon a supervision order, and a reluctance to obtain a care order. Another anomaly which exists in present legislation is exemplified by the fact that five deaths occurred in our sample. The paediatrician concerned strongly supported the diagnosis of child abuse, but in each case a coroner's verdict of "lack of care" resulted and no prosecution was instituted.

In Birmingham at present a central index of physically abused children is in existence, and a request for information card is available to doctors confronted with a suspected "battered baby." It is our experience, in fact, that this index is not often used.

While agreeing entirely with Dr. Jackson's last sentence that responsibility for remedying the lack of awareness of this problem at hospital level rests with the paediatrician it is my contention that even where the diagnosis of child abuse is made, the management at hospital and community level leaves much to be desired.—I am, etc.,

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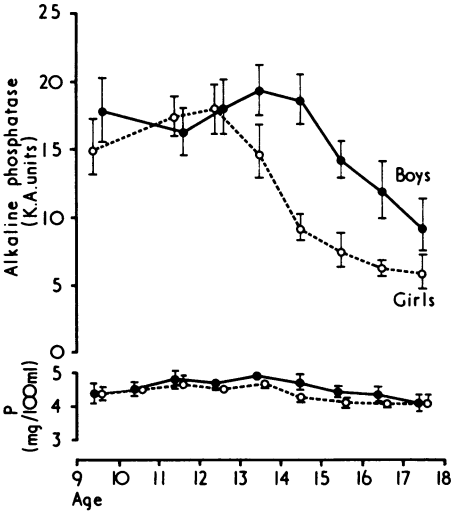
Rickets in Glasgow Pakistanis

SIR,—Dr. J. A. Ford and others (17 June, p. 677) quote the upper limit of normal serum alkaline phosphatase levels in children as 30 King-Armstrong (K.A.) units/100 ml. No mention was made of the possible variation of this limit with age and sex.

A survey is at present being carried out on British school children, age 8-18, from the London area, relating plasma calcium, phosphorus, and alkaline phosphatase levels to age and sex. While results in the younger age groups are at present incomplete, data have already confirmed that a marked adolescent phosphatase "flare" occurs in both sexes and that this "flare" is two to three years earlier in girls than in boys (Fig.). This is followed by a slow fall to the



Mean phosphatase levels and limits of 2×S.E.M. (vertical bars) calculated from log normal values, to offset the upward skew in distribution, and reconverted to absolute values in diagram. Phosphorus levels showed a normal distribution; the mean ± 2×S.E.M. was calculated from absolute values.

normal adult levels (3-10 K.A. units/100 ml in women; 5-12 K.A. units/100 ml in men), which are approached by girls at the age of 14 and by boys at 17. The sex differences are also reflected in the plasma phosphorus levels which show significantly higher values in boys than in girls between the ages of 14-17, representing the longer persistence of childhood levels in the former. Age and sex differences in mean calcium values were not observed in these children.

Six out of 201 boys in the 12-15 age group had phosphatase levels between 30-38 K.A. units/100 ml, while the maximum level among 160 girls was 28 K.A. units/100 ml shown by two girls aged 12. Rickets was not suspected in any of the children on the basis of their calcium and phosphorus levels, although some form of abnormality cannot of course be excluded by simple screening.

Clearly any biochemical assessment of the severity of rickets in young people which is partly based on alkaline phosphatase estimations must be modified according to the sex and more precise age of each patient.—I am, etc.,

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Febrile Convulsions in Early Childhood

SIR,—I am in general agreement with the criteria that you defined (10 June, p. 608) for a good prognosis in so-called febrile convulsions and concur with the view that in general the condition is benign. It is surprising, however, that you choose to ignore the strong and varied epidemiological evidence which not only acknowledges a susceptibility to fit in early childhood which is probably genetically determined but also relates "febrile convulsions" generically to more chronic seizure disturbances in later life, summarized by Ounsted and others.[1]

The risk that a small minority of children will have recurrent febrile convulsions with the attendant hazard of status epilepticus makes a reappraisal of the place of continuous anticonvulsant prophylaxis desirable.

It is very doubtful if the intermittent use of oral anticonvulsants as you advocate has more than placebo value, since adequate therapeutic levels in the blood are unlikely to be achieved within 24 hours of oral administration. Moreover, it is surprising that you are still firmly dedicated to the use of phenobarbitone in children despite its profoundly adverse effects on personality, behaviour, and probably learning in a majority of patients.—I am, etc.,

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1 Ounsted, C., Lindsay, J., and Norman, R., *Clinics in Developmental Medicine*, 1966, No. 22. London, Spastics Society and Heinemann.

Carcinoma of Tongue

SIR,—The author of your leading article on carcinoma of the tongue (6 May, p. 308), is strangely capricious in his choice of data.

It should hardly need to be said that the most important aspect of cancer of the tongue, as of any cancer, is its curability. In this context the 5- and 10-year survival rates are of course the usual indices. However, survival rates for any given site, as must also be obvious, depend upon many variables such as stage, sex, age, and mode of treatment. In addition there are other variables such as degree of differentiation, response to radiotherapy, clinically undetectable lymph node involvement, and other unknown factors, which are difficult or impossible to take into account.

In stating survival rates, therefore, it is essential to state whether the figures relate to a specific stage, age, sex, or treatment group or to what extent they are lumped together. In any event, because of the many variables, known and unknown, it is essential to have a large initial sample—that is, of several hundred patients.

It is somewhat surprising, therefore, that your expert used as his source data the study of Feind and Cole.[1] No criticism of this study is of course being made, but it should perhaps be pointed out firstly, that American findings are not directly applicable to Britain (international figures for the mortality from cancer of the tongue vary widely, of course) and secondly, the findings are based on only 18 determinate cases of early and 27 cases of late stage disease. The figures for 5-year survival rate in your leading article in fact bear no relationship to British experience. The results of the careful studies carried out by Easson and Russell[2] and the even larger samples studied in the recent national survey on oral cancer[3] based on the National Cancer Registry figures for the whole of England and Wales are tabulated below. It will be seen that these figures are in surprisingly close agreement, apart from the single instance of early disease in women in the Christie Hospital series, which is difficult to explain. In no case, however, do the figures come anywhere near those used in your article.