

Correspondence

Because of heavy pressure on our space, correspondents are asked to keep their letters short.

Vision and Television

SIR,—I have read with great interest Dr. A. H. Griffith's survey (*Journal*, November 30, p. 1299) of the relative incidence of defective eyesight among children with and those without television sets at home. In its careful fact-finding and statistical presentation it forms a welcome contrast to the numerous anecdotal reports where television viewing is said to cause various physical disorders. Venous thrombosis, curvature of the spine, or malformation of the jaw due to thumb-sucking are among the more spectacular disorders which have been cited.

Dr. Griffith approaches the problem in a scientific manner. When he carried out his survey of 19,280 7-14-year-old children in Cardiff, he found somewhat fewer young children with television sets at home who wore glasses or had been prescribed glasses; at 11 years of age, the trend became reversed. A significantly higher percentage of children with television sets had defective eyesight (a 3% difference in incidence). Dr. Griffith points to the need for caution in assuming from these results that television viewing causes eye strain, but he finds it the most plausible explanation. That it should occur in older children only, he attributes to the fact that they have a normal tendency towards myopia which makes them less capable of dealing with eye strain compared with younger children, and also that they spend more hours viewing. Dr. Griffith urges that the problem be investigated in a more exacting manner.

A survey which my colleagues and I have carried out on the effects of television on children provided opportunities for a more searching investigation of the problem, even though once again it was not possible to examine the children medically. Since our findings do not support the anxieties about eye strain and television viewing to which Dr. Griffith's article might give rise, I should like to present the data on which our more optimistic conclusions are based.

The survey, carried out on behalf of the Nuffield Foundation, examined the effects of the medium on leisure activities and interests, school performance, outlook, and personality. In the course of the survey, some 2,000 10-11- and 13-14-year-old children from four cities in England were asked "Do you wear glasses?"—a question almost identical with that used in the Cardiff survey. We did *not* find a significantly higher incidence of defective eyesight amongst children with television sets (Table I). The contrast between viewers and controls was sharpened in this survey by using as controls only those children who had no television set and who also did not view more than once a fortnight. In the Cardiff survey, the control group must have contained many regular guest viewers.

TABLE I.—Incidence of Wearing Glasses Among Children With Television Sets at Home and Their Controls

	10-11 Year Olds		13-14 Year Olds	
	Viewers	Controls	Viewers	Controls
Percentage wearing glasses	10.1	15.5	15.8	14.5
Total No.	501	503	499	504

TABLE II.—Percentage of Children Who Ticked "Yes" in Answer to the Question, "Do Your Eyes Ever Hurt You?"

	10-11 Year Olds		13-14 Year Olds	
	Viewers	Controls	Viewers	Controls
Percentage who gave a positive answer	13.2	19.6	19.2	25.4
Total No.	502	504	502	502

We have three sets of additional data which bear on the relations between viewing and defective eyesight: (1) The children were also asked, "Do your eyes ever hurt you?" Table II shows that fewer viewers in both age groups gave a positive answer (in the case of the 13-14-year-old, the difference was significant at the 5% level). (2) We compared the incidence of defective eyesight or eye strain of veteran viewers (those who had had a set for three or more years) with recent viewers, and found no difference. (3) A further comparison, this time between viewers who spent more than 15 hours a week in front of the set, and those who spent less than eight hours, similarly showed no difference.

If television causes eye strain, then surely one would expect the frequent viewer and the veteran viewers to show more signs of it than the infrequent and the recent viewer. We checked on the correctness of the children's reports about defective eyesight by asking the teachers of the children to indicate all those who wore glasses. Here, too, no difference was found between viewers and controls.

Our findings do not, of course, exclude the possibility that, for certain children with potentially defective eyesight, viewing may lead to eye strain. They suggest, however, that the number is not likely to be much larger than the number who do not view but who experience discomfort when exposed to other sources of eye strain.—I am, etc.,

London, W.14.

HILDE T. HIMMELWEIT.

SIR,—Dr. A. H. Griffith's survey (*Journal*, November 30, p. 1299) is obviously the result of much painstaking work, and I hope that he will forgive me if I offer some criticisms of it. Indeed, he admits in his survey that it is open to criticism, and in his interview on television he admitted that he was not an eye specialist and suggested that eye specialists would be better able than he to answer the questions put to him. I hope shortly to submit a monograph for publication under the title "Dysopsia," in which I hope to show that such expressions as "eye strain" and "asthenopia" should be banned from our phraseology and that the anatomy and physiology of vision do not support any fears that over-use of the eyes can do them the slightest harm. It will be suggested that symptoms of ocular distress should be referred to as dysopsia.

Meantime, may I make one or two points quite briefly? In over 25 years as an ophthalmologist, I can assure Dr. Griffith that the fact that a person wears spectacles by no means proves that he needs them. Indeed, one of the greatest extravagances of the National Health Service is reflected in the extent to which spectacles are supplied quite unnecessarily. Again, no more is known about the cause of myopia than of why it tends to increase during the years of growth, but I am quite convinced from my observations on very many thousands of children that there is no connexion between the incidence and increase of myopia and use—"excessive" or otherwise—of the eyes. Nor, in my experience, is there any connexion between glaucoma and uncorrected hypermetropia. The ciliary muscles and the extraocular muscles will undoubtedly tire from much use like any other muscle—but how on earth can they be "strained"?

Finally, I do agree that television in excess is bad for everybody in that it can be such a colossal waste of time.—I am, etc.,

Southport.

DAVID RANKINE.

Use and Abuse of Blood

SIR,—Referring to our letter (*Journal*, October 19, p. 940), we are grateful for Dr. C. B. V. Walker's support (*Journal*, November 2, p. 1046). We would agree with him entirely that the figures we gave of 42,458 pints of blood collected in 1950 rising to 66,246 pints of blood collected in 1956 are not of themselves indicative of wastage or abuse. These figures were quoted merely to emphasize the tremendous expansion which has been achieved in an attempt to meet the demand. Dr. Walker suggests that if evidence of misuse is available it should be published.

In the Sheffield region the hospital banks maintained from the regional transfusion centre are regularly stocked up, twice every week, to an agreed number of bottles. The transfusion centre has very little knowledge of how this blood is used. When extra supplies are required application is made to the transfusion centre, and, in order to assess urgency and priority of delivery and to detect any duplication of calls concerning a single patient, certain particulars of the case are required. Sometimes the information obtained is such that the medical officers at the transfusion centre will make further inquiry of the pathologist or clinician in charge of the case at the hospital. The evidence which Dr. Walker requires can be obtained from these records. For example:

Case 1.—Male; age 63; diagnosis: inguinal hernia, for operation the following day; haemoglobin 93%; two pints (1 litre) of group O Rh-negative blood requested. One of us personally checked these details and the circumstances of the case with the clinical pathologist in charge of the blood bank concerned. *Case 2.*—Male; age 66; for colostomy; haemoglobin 98%; two pints (1 litre) of Group O Rh-negative blood requested. *Case 3.*—Male; age 57; admitted as a haematemesis; partial gastrectomy performed; subsequently diagnosed as Hodgkin's disease. Convalescence complicated by burst abdomen which was healing slowly when, with a haemoglobin of 92%, four pints (2 litres) of fresh group A Rh-positive blood were requested. *Cases 4 and 5.*—Two and three pints (1 and 1.5 litres) of blood respectively were prescribed for two married women from the same hospital for puerperal anaemia. The first, three days delivered, had a haemoglobin in the 60's and the other, nine days delivered, a haemoglobin in the 70's. The consultant obstetrician, when approached about these cases, had no knowledge of either transfusion, and both were in fact cancelled with his complete agreement. *Case 6.*—Married woman; diagnosis: antenatal anaemia; two pints (1 litre) of B-positive blood were requested, haemoglobin unknown. On further investigation it was found that this request from a consultant was based on a haemoglobin level of 65% three months earlier. At our instigation an up-to-date haemoglobin estimation was done. This was found to be 75%, the patient having received neither blood nor iron. The request was cancelled.

Many more examples of this type of request are available, but space will not permit of more than these few to demonstrate our argument. It would seem that sometimes blood is ordered by junior staff without the knowledge of the consultant, and the latter when approached will agree that transfusion is not indicated. On other occasions, however, it is exceedingly difficult to appreciate any indication for transfusion, whoever has been responsible for prescribing it. These records also provide an answer to Dr. R. M. Baddeley (*Journal*, November 30, p. 1305) in that the misuse of blood is not confined to any particular grade of hospital clinician.

Dr. M. S. Beare (*Journal*, November 2, p. 1046) and the Consulting Pathologists Group (*Supplement*, November 9, p. 146) have raised the question of pilot tubes. It has always been the policy of this centre to provide a pilot tube, and for those who have studied this problem, not merely from a regional but from a national and international point of view, there can be no doubt that the provision of a pilot tube is a wise and necessary procedure which is steadily gaining ground wherever transfusion services exist. We believe that the recommendations in the Ministry of Health's booklet *Notes on Transfusion* concerning sampling of blood bottles are not unreasonable. We also believe that it may be desirable to keep one or two bottles of blood crossmatched for several days at a time for an in-patient with, for example, an ante-partum haemorrhage. Unless a pilot tube is provided, it does not seem possible to observe both these desiderata at the same time without wasting blood. May we answer Dr. Beare's challenge by referring him to an article published elsewhere¹ by an ex-deputy director of this centre describing just such a tube as he requires, and one which has proved entirely satisfactory?

It must be remembered that, owing to the phenomenal growth of the National Transfusion Service, many centres are now accommodated in inadequate premises with depleted staff, and in those regions where pilot bottles are not yet provided only production difficulties and physical limitations

may be preventing their introduction. In addition, as Dr. D. Stark Murray (*Journal*, November 23, p. 1239) points out, the introduction, or otherwise, of pilot tubes throughout a region requires a steady level of conscientious work in hospital blood banks and co-operation between them and their transfusion centre. We know that pilot tubes are now operating satisfactorily from the majority of English transfusion centres. There may be some good local reasons why the practice, although growing, is not yet universal.

We would like to reiterate our plea for a more careful estimation of patients' needs for blood. At the present time we feel like Mark Antony when he says:

"I know not, gentlemen, what you intend,
Who else must be let blood."

Brutus in the same scene seems to express the clinician's attitude:

"And let us bathe our hands in Caesar's blood
Up to the elbows, and besmear our swords."

—We are, etc.,

Sheffield, 10.

C. BOWLEY,
J. DARNBOROUGH.

REFERENCE

¹ Campbell, J. S., *Lancet*, 1955, 1, 1058.

SIR,—One of the many causes of misuse of blood is the more or less cold surgical case found on admission to have a haemoglobin regarded by the surgeon concerned as not high enough to justify operation. Such cases can be minimized by out-patient haemoglobin estimations at booking, but the efficiency of this varies with the length of the waiting-list. When such patients do arrive the problem arises as to whether to send the patient home and write for another, administer suitable haematinics until the haemoglobin reaches a satisfactory level, or to transfuse and operate the following day as planned. The dice are all heavily loaded in favour of the last alternative; a large factor in this is the importance placed by the regional boards on a high bed turnover and occupation. It is difficult to see a way out. Stressing, in general terms, the danger of transfusion carries little weight with those who have seen many transfusions but never a transfusion death or even a dangerous reaction, a category to which the great majority of surgeons must surely belong. Intense propaganda with statistics might achieve a satisfactory result, but if too wide might well lessen the supply of blood. Such propaganda would have to be directed by the regional boards, whose understandable policy over bed occupation and turnover is largely responsible, to the clinical staffs of hospitals.—I am, etc.,

Pirbright, Surrey.

C. RICKWORD LANE.

SIR,—Blood is a voluntary gift from altruistic donors. Therefore no one, physician, surgeon, anaesthetist, or patient, has any "right" to it, but can only ask if there be any available, and should be profoundly grateful if this be the case.—I am, etc.,

Hasings.

P. LAZARUS-BARLOW.

Ankylosing Spondylitis

SIR,—The interesting paper by Drs. V. L. Steinberg and Geoffrey Storey (*Journal*, November 16, p. 1157), on the co-incident finding of ankylosing spondylitis in four patients with ulcerative colitis and two patients with Crohn's disease, provides further support for the suggested pathogenesis of spondylitis. I have seen three patients with (preceding) ulcerative colitis associated with ankylosing spondylitis, while examining the radiographs of about 200 patients with the latter disease. One of these cases has been briefly illustrated in a review of the radiological features of the disease.¹ I should like to support the theory discussed by Steinberg and Storey and previously suggested by Romanus,² that ankylosing spondylitis may frequently be a destructive arthritis precipitated by chronic pelvic sepsis.

Lesions of the sacro-iliac joint which are radiographically similar to those seen in ankylosing spondylitis may be found