Neutron squamous cell carcinoma

Sir,—Dr Mary Catrall's letter cannot stand unchallenged. Firstly, it is quite possible to cure some advanced head and neck cancers without incurring great tissue damage to the degree which results in death in the British, as is adequately Mr N Stafford and colleagues. Secondly, it is almost beyond belief that Dr Catrall seriously compares the advent of neutron therapy with the quantum leap that was made when effective chemotherapy for Hodgkin's disease was first used. This particular example represents one of the very rare successes in modern cancer therapy when the magnitude of the advance was so great that no one could have conceived a randomised controlled study in patients with advanced disease, for which no satisfactory alternative treatment then existed. The "complications" which Dr Catrall refers to consisted in the case of chemotherapy for Hodgkin's disease chiefly of short term and reversible problems such as nausea and myelosuppression, whereas the tragedy of side effects of neutron therapy lies in their long term and irreversible nature.

J S TORMAY
Department of Radiology and Oncology,
Petersfield General Hospital,
London W1E 6AU

Supply of blood products

Sir,—In October 1990 the Department of Health issued a statement entitled Supply of blood products: the UK view. It read: "Since 1976 it has been government policy that the UK, with its long tradition of voluntary blood donation should be self-sufficient in blood products. This position is entirely consistent with the more recent decision by the EC to promote a policy of community self-sufficiency based on voluntary blood donation. At the same time, Ministers accord second greatest importance to the principle of clinical freedom. Where therefore a doctor decides, in the light of the available clinical information, that a particular product is indicated for a particular patient, we believe that this decision should be respected even if product has to be imported from outside the EC. The principle of self-sufficiency therefore means that the supplies of domestically sourced blood products should be sufficient, both in range and quantity, to meet the needs of all patients. Where this is not possible, preference should be given to local blood, and audit arrangements put in place designed to ascertain why such external supply arrangements are necessary and whether they need to be sustained.”

J D CASH
National Medical and Scientific Director, Search National Blood Transfusion Service, Edinburgh EH1 1JR

Tobogganing injuries

Sir,—The rare/ heavy snowfalls in England are associated not only with the hazards of snow shovelling but more so with that of sledding. The public's benign view of amateur tobogganing is not always appropriate.

From the evening of Friday 8 February to the evening of Sunday 10 February 1991, 62 patients presented to the accident services of the John Radcliffe Hospital, Oxford, with injuries caused by falls from, or collisions while on, sledges or toboggans. Of these, 10 required admissions to hospital, seven needed minor operations under local anaesthesia to treate lacerations, and a further six needed operations requiring general anaesthesia. There were 36 male and 26 female patients, average age 23 (range 7-50) years.

The breakdown of injuries is shown in the table. Injuries of note were a displaced Salter-Harris type 3 distal tibial fracture in a 12 year old boy requiring open reduction and internal fixation, and a displaced Salter-Harris type 2 distal radial fracture in a 3 year old girl.

Tobogganing injuries sustained 8-10 February 1991 and treated at John Radcliffe Hospital

<table>
<thead>
<tr>
<th>Fracture</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper limb</td>
<td>13</td>
</tr>
<tr>
<td>Lower limb</td>
<td>6</td>
</tr>
<tr>
<td>Control injuries</td>
<td>4</td>
</tr>
<tr>
<td>Soft tissue injuries</td>
<td>6</td>
</tr>
<tr>
<td>Upper limb</td>
<td>2</td>
</tr>
<tr>
<td>Lower limb</td>
<td>10</td>
</tr>
<tr>
<td>Patellar injuries</td>
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<tr>
<td>Lacerations requiring suture</td>
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</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>
CORRESPONDENCE

Supply of blood products

Sir,-I am comforted to learn from Professor J D Cash's letter¹ that he is as confused and concerned as I am by the Department of Health's recent statement Supply of blood products: the UK view. If the department is seriously committed to self sufficiency it should refrain from actively promoting clinical freedom in this aspect of health care for it will give much encouragement to those who import blood products manufactured from paid donors of plasma. Such activity could seriously damage voluntary blood donations, would be contrary to the principles in the European Commission's directive 89/381, and would promote the use of products derived from plasma that may have an appreciably higher infectivity than that from unpaid donors.

Professor Cash did not point out that the recently introduced NHS marketplace, of purchasers and providers, has created substantial further potential for damage to the blood transfusion services in England and Wales. It is well known, in all parts of the world, that the cost of collecting plasma from unpaid donors is higher than the cost of collecting it from paid donors. This is due to higher standards of care for volunteer donors and the extra expense entailed in collecting plasma at the times when most donors are not at work. These facts are now acknowledged by the Department of Health or by the NHS Bio Products Laboratory; the government's imposed payments for plasma made by Bio Products Laboratory to transfusion centres is modelled on the international spot market price for commercial plasma sales thus unrealistically low. The magnitude of the difference (20-30%) between the procurement cost and the payments by Bio Products Laboratory is so great that grave financial problems are developing in most transfusion centres throughout England and Wales and efforts are being made to fend off a collapse by implementing cross subsidisation. This will entail purchasers of blood components such as red cells and platelets paying an extra amount to make up for the unrealistically low price of plasma.

Another serious problem is Bio Products Laboratory's loss of market share for factor VIII in favour of products from paid donors. As a consequence we have been advised to reduce our targets of input plasma to the laboratory—the British blood donor's gift is being turned away. Market forces, cloaked in euphemisms about clinical freedom, are dictating that patients will receive the cheap and potentially less safe product options—products from paid donors.

Ministers must urgently decide whether they really wish to support the principles of a national blood transfusion service or a system of voluntary, unpaid blood and plasma donors; and self sufficiency. A decision in favour of this approach will require financing, but it will be a worthwhile investment both as a long term strategic exercise and to ensure that we are really committed to "working for patients." Generations of voluntary, unpaid blood donors have served this country for over 50 years, and the deliberate attempt to convert their gift to the nation into marketable commodities might turn out to be a grave political error of judgment.

MARCELA CONTRERAS
North London Blood Transfusion Centre,
London NW7 5BG

1 Cash JD. Supply of blood products. BMJ 1991;302:549. (6 April.)

Sir,-I challenge the conclusions of Professor J D Cash on two grounds that may not be evident from his letter on the supply of blood products.¹ Firstly, Professor Cash has totally Ignored the potentially negative effects of self sufficiency in plasma from unpaid donors either in the United Kingdom or in Europe, with the exclusion of sources in the private sector. Many of the substantial advances in quality, safety, and clinical research in products derived from plasma have either resulted from the work of the private sector or been supported by it. The disappearance of this resource can scarcely be in the interest of patients or doctors.

Plasma products from commercial sources have always provided an invaluable buffer against shortages due either to technical problems or to fluctuations in demand. Without such a buffer adequate treatment of patients could be placed at risk. All plasma derivatives are not equivalent in purity, quality, or clinical efficacy, and self sufficiency through a few European public sector sources will inevitably lead to a restriction of clinicians' choice and thus not always provide the best treatment for patients.

My second point is that the European Commission's directive merely sets forward self sufficiency in plasma with unpaid donors as an objective to be worked towards and not a mandatory requirement. The reason for this approach is almost certainly an appreciation of the potential problems outlined above together with a growing realisation that self sufficiency is an elusive goal. Europe is currently only about 50% self sufficient, and requirements, particularly for coagulation factors, are increasing as such concepts as the prophylactic treatment of haemophiliacs become accepted.

The quality and safety of plasma are not functions of payment or non-payment. Areas of high risk for AIDS and hepatitis and the sophistication and intensity of donor screening are much more important than whether the donor receives payment or, as often occurs in the public sector, other benefits such as free meals, paid holidays from work, or "expenses." ² It would seem more relevant to concentrate effort on ensuring that the plasma collected from both paid and unpaid donors meets the same high standards of screening and testing to provide the maximum safety of the finished products and to combat false self sufficiency— that is, inadequate supplies to account for both private and public sectors to meet patients' needs for adequate treatment to give them the best possible quality of life. In this context, the Department of Health's statement is accurate.

R B CHRISTIE
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1 Cash JD. Supply of blood products. BMJ 1991;302:549. (6 April.)

Sir,-Dr Iain K Crombie reports high suicide rates in the highlands of Scotland.² Research in progress in Scotland shows that the mortality from suicide (ICD 950-959) in that area was inflated during 1986-8 by 13 deaths of people who were not resident in Scotland (out of a total of 91 deaths (of both men and women)). These 13 deaths constitute a high proportion of the total of 43 deaths of non-residents from suicide in Scotland as a whole. When these deaths are taken into account the (crude) ratio for Highland Health Board falls from 169 to 119, which only just exceeds the value for the borders (118), with Dumfries and Galloway, Grampian, and Greater Glasgow Health Boards also having high ratios of 113, 113, and 111 (deaths of non-residents excluded).

Deaths of people not resident in Scotland may substantially influence published statistics, in particular those on deaths due to accidental and violent causes, and thus the interpretation of mortality differentials. The registrar general for Scotland could improve comparability by omitting the deaths of non-residents from area statistics, as is the procedure in England and Wales.

VERA GARSTAIRS
Health Services Research Network,
University of Edinburgh,
Edinburgh EH3 9JT


² Dr Iain K Crombie's epidemiological review of suicide among men in the highlands of Scotland during 1974-80 raises some interesting questions about life in the highlands. Before accepting his conclusions, however, I require more explanation of his data on standardised mortality ratios.

As a police surgeon during the period of the study, on several occasions I visited remote beauty
Suicide among men in the highlands of Scotland

Sir,—Mrs Vera Cartmell and Dr D J M Douglas' point out that suicide by visitors could artificially inflate the apparent mortality in the highlands.

This will apply only to people not normally resident in Scotland at deaths among visitors from other parts of the UK, and not to their place of usual residence. None the less, there was an inflationary effect on the data that I used in my study, but it was of the order of magnitude that predicted by Mrs Cartmell.

The discrepancy between Mrs Cartmell's estimates and my own may have arisen because she used a limited period, 1980-84, and the resulting standardised mortality ratios may have been atypical owing to chance variation. Certainly, in a subsequent personal letter she reports an analysis of the period 1980-85 and concludes that, after exclusion of non-residents, "the mortality remains high in most of the highland districts." The conclusions from my study were not just about high rates in the highlands but also that the rates were unexpectedly low in the central belt of Scotland. Again, in her further analysis Mrs Cartmell confirms this finding. I am interested to learn from Dr P M Larragh' that suicide in Northern Ireland seems to differ from that in Scotland in being less common in rural areas. This makes more puzzling the Scottish pattern of high rates in lowland central districts and low rates in the urban central belt.

The secretary of the BMA replies: BMA members who are general practitioners have been able to express views on the new contract at meetings of BMA divisions when the association's current policy and annual representative meetings and its craft conferences. In addition, an extensive monitoring exercise undertaken last year enabled every practice to give their views about the day to day working of the contract, and there is no need for a referendum or ballot to ascertain general practitioners' views. I cannot think of any other profession or trade union that has been so well informed and would if other members feel similarly. I would also be interested to know whether our "leaders" have any plans to rectify this sad state of affairs.

J D BEALE

The Grange Medical Centre,
Ramsgate CT11 9JF.

Supply of blood products

Sir,—We share Professor J D Cash's anxieties over the situation in the Department of Health entitled Supply of Blood Products: The UK View.

Five years ago the regional transfusion directors (England and Wales) asked the Department of Health to consider options available to achieve a properly funded and fully integrated National Blood Transfusion Service.

The problem is that the Department of Health has not been able either to gain the co-operation of the local authorities or to secure the agreement of the private sector.

One of the factors that now faces the national directorate is that it can only advise the blood transfusion service as we know it cannot exist.

We believe that we must build on the sound foundation laid by the national directorate to collect sufficient blood for use in hospitals and to establish an effective foundation for the National Blood Transfusion Service. Such a foundation is best achieved by the Bio Products Laboratory and the National Blood Transfusion Service.

C. D. FRASER

Regional Transfusion Centre,
Birmingham B15 2SG.

Regional Transfusion Centre,
Bristol BS10 3ND.


Creutzfeldt-Jakob disease and blood transfusion

Sir,—Currently, the general public are very aware of the potential of blood transfusion to transmit infection unless appropriate selection of donors and testing have been carried out. Thus we are concerned that the comment that "Transmission of Creutzfeldt-Jakob disease may occur through donor tissue, infected blood, and urine" should not be misinterpreted. This comment was referenced to a review that stated, "There is no recorded case of CJD [Creutzfeldt-Jakob disease] transmission by blood in man, but transmission via human blood to mice has recently been reported (Tateishi, 1985)."

The report by Tateishi was of transmission by means of intracerebral inoculation of a crushed blood clot obtained at necropsy from a patient with the disease into mice. Mice to mice transmission through inoculation of blood was also successful. Manuelidis et al have reported transmission of the disease from the buccal coats of affected subjects by intracerebral inoculation into guinea pigs.

Despite the transmission of Creutzfeldt-Jakob disease from human sources by intracerebral inoculation of laboratory animals and the passage of infection in mice by inoculation of blood, it should be emphasised that there is no evidence of any association between transmission of the disease and blood transfusion in the many millions of patients who have received transfusions. Although virnaemia can occur in patients with Creutzfeldt-Jakob disease, current criteria for selecting donors in the blood transfusion service ensure that demented subjects and (since 1986) people who have received pituitary extracts are excluded from donating blood as preventive measures. The differences between intracerebral inoculation of laboratory animals and transmission of human blood must be clearly borne in mind, while maintaining present limits of the potential hazards of blood transfusion.

MARCELA CONTRERAS
JOHN BARRA

North London Blood Transfusion Centre,
London NW9 5BG.

CORRESPONDENCE

Avoidable blindness

SIR,—In his editorial Dr Andrew R Potter states that blindness in about 80% of the 30 million affected is avoidable.1 This is a concept much favoured by those concerned with public health and population disease. It is a cute semantic device whereby cataract, which is curable but not yet preventable and is by far the largest cause of blindness, is added to such potentially preventable diseases as xerophthalmia, trachoma, and onchocerciasis to show that most blindness is avoidable. This has proved to be quite profitable for government agencies working to prevent blindness.

In other respects, however, how useful is it to talk of avoidable blindness? Not at all, I suggest, and it can be misleading. The major killers are all avoidable to a considerable extent if people have a better lifestyle (coronary disease, cancer, stroke) or better living conditions (malnutrition, gastroenteritis). Labelling such diseases as avoidable would not help to bring about needed change.

As Dr Potter points out, "Unless things change the number of people who are blind will double by the year 2025." He is, of course, urging greater awareness and increased resources and personnel, but I suggest that the necessary change is conceptual rather than logistical.

From earliest times until only recently medicine has concerned itself with treating individual patients. With increasing complexity of knowledge and practice it was inevitable and fully justifiable that specialisation by systems should develop. This organ based approach to necessary for treating individual patients is, however, totally inappropriate for controlling disease in the community, where health interventions are broadly based. It is neither logical nor cost effective to hive off the numerous patients with whom each organ specialist is charged into a single treatment for a multiplicity of causes.

That this is true can be seen from last month at Hammersmith Hospital. Eleven patients in whom in vitro fertilisation had failed conceived after tuboplasty, correction of uterine disease, or induction of ovulation or simply spontaneously. All had previously had multiple separate private attempts at embryo transfer unknowingly into a non-existent uterine cavity at a cost of nearly £30000. I was put under great pressure to release her name, but this was refused, as was the identity of the clinic largely responsible for her mismanagement. Secondly, I said that "many private [in vitro fertilisation] clinics are, in the main, offering a single treatment for a multiplicity of causes." That this is true can be seen from last month at Hammersmith Hospital. Eleven patients in whom in vitro fertilisation had failed conceived after tuboplasty, correction of uterine disease, or induction of ovulation or simply spontaneously. All had previously had multiple separate private attempts at embryo transfer unknowingly into a non-existent uterine cavity at a cost of nearly £30000. I was put under great pressure to release her name, but this was refused, as was the identity of the clinic largely responsible for her mismanagement.

Thirdly, I observed that "many [in vitro fertilisation doctors] have gone into the private sector because they have failed to make the grade sometimes in the NHS." This is substantiated by the numerous applicants from private clinics trying unsuccessfully to get back on to the career ladder. Mostly, they are not even shortlisted.

In our weekly clinics at Hammersmith Hospital we see perhaps six new patients who have been inappropriately or inadequately treated, mostly from various private in vitro fertilisation clinics. These patients in general are not dissatisfied customers, complaining about their previous doctor, but couples whose sad mismanagement would make sensitive doctors weep. We cannot encourage patients to sue their previous doctor, and most private communication is treated as a hostile response. These are not problems that could have been effectively policed by the excellent Interim Licensing Authority and there are occasions when, despite Professor James Owen Drife's rather ill-judged comments,1 the medical profession needs to come clean. Often, we are reputed to close the shutters against criticism. In the case of in vitro fertilisation and related treatment patients are too frequently getting a raw deal from the NHS and often from private clinics. Of course I have no "contempt of clinics in the private sector"—there are many good ones—but our profession should do much more to protect the interests of these particularly desperate and vulnerable patients.

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Institute of Obstetrics and Gynaecology,
Hammersmith Hospital,
London W12 0NN


Supply of blood products

SIR,—In response to My R B Christie's recent letter, I regret that I was unable to comment on the potential difficulties of national self-sufficiency in my earlier letter, but editorial considerations necessitated substantial reductions in the final text and, in any event, I have addressed this topic before.2 Mr Christie is right to emphasise that commercial sources of plasma products have, in the past provided an important buffer against shortages, but European politicians have decided that this buffer has hitherto been too large and has brought with it needless devastation in the form of transmission of viral disease. There is nothing unique in the concepts of self-sufficiency: the European Commission has simply implemented recommendations made by the World Health Organisation in 1975.

Mr Christie's statement that the safety of plasma is not a function of payment or non-payment of donors is frankly astonishing. Many scientific publications refute this statement, and I know of none in support of it. Publications on this topic started in the 1930s with syphilis and continued with hepatitis B virus, cytomegalovirus, HIV-1, HIV-2, human T cell leukaemia/lymphoma virus type 1, and hepatitis C virus. On the other hand, we should support Mr Christie's exhortations that we must concentrate more effort on ensuring that the plasma collected from both paid and unpaid donors meets high standards of safety. Doctors will be interested to note that those collecting plasma from paid donors in the United States have recently considered it necessary to propose that it should be assayed for contamination with hepatitis C virus.

Mr Christie suggests that I proposed that the European Commission's directive on self-sufficiency is legally binding (mandatory). This is not so, and I have specifically emphasised this point previously.3 But a definition of self-sufficiency in the Oxford English Dictionary is "able to meet one's

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need from one's own resources, and that is the goal that the European Commission has set. It follows that our government should now be striving to establish appropriate conditions that will enable those with this formidable task to respond appropriately. There can be no doubt that the United Kingdom can be self-sufficient in providing the major blood products, provided that the blood transfusion services are allowed to develop appropriate management arrangements.

Mr Christie emphasises the desirability of maintaining clinical freedom of prescribing but one wonders that the recent events in Europe are as unsymmetrical in their effects on the competitive factors. This has been declared their desire to prescribe, exclusively, high quality products derived from plasma of unpaid donors. Finally, I share Mr Christie's concern about the potential monopoly of the supply of blood products and regulatory mechanisms. Perhaps they need reminding that the central issue is that the United Kingdom's recent directive was only one of three extending directives issued at December 1980. It was Bio Products Laboratory's purpose of which was to bring under the control of the nationalised industry all the activities relating to plasma. In fact, the directive cited was only one of three extending directives issued at December 1980. It was Bio Products Laboratory's purpose of which was to bring under the control of the nationalised industry all the activities relating to plasma.

Professor Cash indicates that the central issue is that the United Kingdom has been supplying to the United Kingdom for many years in manufacturing facilities that fall far short of acceptable practice. Granada Television, "The blood business," 22 December 1980). It was Bio Products Laboratory's intention that this should be withdrawn. Until an appropriate system is developed, it is impossible to determine whether the British public has to rely totally on them in the future. Industry produces a range of blood products that are required in the United Kingdom and it is impossible to determine whether the British public has to rely totally on them in the future. Industry produces a range of blood products that are required in the United Kingdom and it is impossible to determine whether the British public has to rely totally on them in the future. Industry produces a range of blood products that are required in the United Kingdom and it is impossible to determine whether the British public has to rely totally on them in the future. Industry produces a range of blood products that are required in the United Kingdom and it is impossible to determine whether the British public has to rely totally on them in the future.

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The industry has made remarkable progress in minimising this potential by implementing rigorous programmes to screen donors and aggressive processing steps such as monoclonal antibody purification, solvent-detergent treatment, irradiation, and combinations of these innovations. Plasma derivatives shown to be safe and effective for their intended purpose should be available for patients, regardless of their source.

Penicillin prophylaxis in children with sickle cell disease

From their recent survey Dr David Cuningham and colleagues concluded that "doctors' knowledge about sickle cell disease was generally poor" and that most general practitioners interviewed had never prescribed penicillin prophylaxis for children with sickle cell disease. Since its value was first established by Ferguson and Scott in the United States and by Sloop and others in Africa penicillin prophylaxis has been used throughout the world, notably in the West Indies and in Africa. Penicillin prophylaxis has been used throughout the world, notably in the West Indies and in Africa. Penicillin prophylaxis has been used throughout the world, notably in the West Indies and in Africa. Penicillin prophylaxis has been used throughout the world, notably in the West Indies and in Africa.

I can see at least three important reasons why some doctors do not prescribe prophylactic penicillin for their patients with sickle cell disease, even though they are aware of the proved value of such treatment. Firstly, the delay in acquiring immunity to Haemophilus Influenzae and the emergence of strains resistant to penicillin, not to mention problems of compliance, with the resultant severe infection are perceived as "potential disadvantages of prophylactic penicillin." Secondly, patients not reaggregating long term penicillin prophylaxis but who are seen more frequently than the "four to six monthly outpatient visits" have done well. Thirdly, some doctors may use penicillin prophylaxis selectively rather than for all patients because they realise that deaths have often had more to do with what I call the "global circumstances" of the crises that preceded the death than whether the patient was receiving penicillin. Long term treatment with penicillin is but one of several factors that proper surveillance is meant to monitor.

Dr Cuningham and colleagues' suggestion that haematuria and proteinuria should be stepped up to help parents supervise their children is supported by the finding in Jamaica that "compliance reached nearly 100 percent in a domiciliary trial." Finally, it is well to remember that, apart from the effect of the external environment (microbes, ambient temperature, partial oxygen pressure, exercise, etc) on sickle cell disease, the patient's genetic make up may modify the disease, making it worse, as, for example, if the patient has concomitant gillamine 6-phosphate dehydrogenase
did not give a history of diarrhoea or vomiting. An x ray film of her left shoulder showed a pathological fracture of the neck of the humerus, and after histological examination of the bone an IgG myeloma was diagnosed. Her renal function and serum sodium concentration improved with fluid replacement, and she received chemotherapy for her myeloma. At discharge from hospital she had normal renal function.

In conclusion, it appears that non-steroidal anti-inflammatory drugs can increase serum sodium concentrations, diminish renal clearance of lithium, and possibly induce lithium toxicity. General practitioners caring for patients being treated with lithium should be aware of this interaction. Patients receiving lithium and non-steroidal anti-inflammatory drugs should initially have their serum lithium concentrations checked every four to five days. The dosage of lithium may have to be reduced after assessment of any drug interaction.

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Supply of blood products

Sir,-The letters of Mr J P Betts and Dr M B Rodell contain several misleading statements, which, because they may have formed the basis of the only advice received by ministers, deserve a response.

Mr Betts expresses no surprise that I am a champion of national self sufficiency in blood and blood products yet seems to forget that in 1987 he raised serious doubts that our government had fully understood what its representatives from the Department of Trade and Industry and the Department of Health had agreed in Brussels. Moreover, I pointed out that the United Kingdom's commitment to self sufficiency in these negotiations had been made without consultation with any senior operational managers of the blood transfusion service. I now do indeed champion self sufficiency, based on unpaid blood donors, because it forms the central feature of the European Community directive 89/381, to which our government has been made without consultation, and I understand that the question of avoiding standard regulatory procedures in the United Kingdom by using crown immunity was never considered by the Protein Fractionation Centre.

I believe that Mr Betts has diverted attention from the important issues concerning the safety of intravenous immunoglobulin preparations with respect to transmission of non-A, non-B hepatitis. Factors such as the quality of the starting plasma (including screening of donors for infections with viruses), the degree of plasma technology used, and various treatments after fractionation (some of which are thought to be virucidal) need to be considered. Furthermore, prospective or retrospective screening of recipients for possible transmission of non-A, non-B hepatitis needs to be undertaken, as has been described for several intravenous immunoglobulin preparations.

When assessing the safety of intravenous immunoglobulin preparations with respect to non-A, non-B hepatitis it should be noted that in the episode we reported only one batch out of 110 was implicated. Since that time a further 55 batches have been used and detailed follow up of immunodeficient recipients has not identified any further cases of non-A, non-B hepatitis (P L Yap, A A M Todd, and P E Williams, unpublished data). Interestingly, our experience has paralleled that of other investigators where transmission of non-A, non-B hepatitis has been substantiated. Much has happened since 1978, as many patients with haemophilia will testify. Moreover, I pointed out that the central issue is the availability of non-A, non-B hepatitis associated with intravenous immunoglobulin in the UK and the safety of intravenous immunoglobulin.

P L YAP
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Relevant issues with respect to the quality of the plasma. All donors, irrespective of the type of compensation, undergo equal intensive screening to eliminate the potential for transmitting disease. To improve the quality of plasma, emphasis should be placed on educating donors and on streamlining programs in addition to proper testing.

Secondly, plasma, whether from paid or unpaid donors, is subjected to numerous fractions and plasma products, which result in viral partitioning and inactivation. The processes all have a demonstrated margin of safety.

Thirdly, self sufficiency is not easy nor achievable to achieve. Two ways to increase the amount of products available are to decrease the amounts used and to increase the volumes of plasma collected as whole blood and plasma. This is not acceptable to lower the amount of products available are to decrease the plasma required, or to factor VIII used by each hemophiliac patient.

Emergency surgery, and prophylaxis do not approach the objective of collection of plasma. Plasmapheresis is the most practical means to accomplish this. This would require increased recruitment of donors and financial arrangements to depend more on price than quality. The criteria for selecting products at the sacrifice of the yield of factor VIII per litre of blood and plasma. This not acceptable. The criteria for selecting products should be placed on price rather than quality. The use of non-self-sufficient plasma is so common that the issue of self-sufficiency has been considered imprudent for donors to take an interest in the long term, or if the returned support may be evaluated.

The recent European Community directive endorses the goal of self sufficiency in blood components from voluntary unpaid donors. The economic case for paid blood donation is prudent only in the plasma protein concentrates of which blood borne viruses can be eliminated. Even though, the cited research was from the United States.

Furthermore, 10% had impaired left ventricular function. Dr Marber and colleagues were disturbed to note that nine of their nine patients who died while awaiting surgery had three vessel disease and left ventricular dysfunction. We do not, however, have the benefit of perspective as they did not state how many of their patients with such a combination came to no harm while waiting.

I agree that these patients merit priority for coronary surgery. In our experience conventional exercise electrocardiography makes no major contribution to triage because it nearly always yields positive results in patients requiring surgery—indeed, many are selected for angiography in the first place partly because of the predictability of exercise test results. However, performing such exercise testing with the patients still taking their regular regular medications (as opposed to stopping them temporarily for the test) might refine the process of triage as a result that is abnormal despite treatment implies inadequate "cardiac protection" and thus continuing vulnerability while the patient is on the waiting list.

The real issue raised by Dr Marber and colleagues remain unaddressed: Can there be consensus about what constitutes dangerous and therefore unacceptable delay? If so can NHS waiting times be shortened? If not can triage be improved in a cost effective way?

RICHARD LIM

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London EC1A 7BE

Note: The commentary does not discuss the issue of paid blood donation but rather focuses on the importance of self-sufficiency in blood components and the implications of using voluntary unpaid donors for plasma collection.

Deaths of patients waiting for coronary surgery

Sir,—It comes as no surprise that Dr Michael Marber and colleagues found waiting times for coronary angiography and surgery to be longer in the NHS than in the private sector. What is remarkable is that despite long NHS waiting lists for surgery only nine patients died from cardiac causes over the 10 years of the study. This could be more misleading, however, if the actual number on the NHS surgical lists was reported.

An audit of 92 patients added to our waiting list for elective surgery in 1988 showed no deaths during a median wait of 93 days (range 6-400). This was despite an incidence of main stem and three vessel disease of 84%.

Further research was carried out investigating the long term outcome of patients on the waiting list for coronary surgery.


The cyclotron saga continues

Sir,—The trial of high energy neutrons in the management of pelvic cancers at Chesterfield Royal Hospital reported by Dr R D Errington and colleagues was poorly designed and conducted, which raises questions about the effectiveness of the treatment. The study was stopped because of increased toxicity.

The cyclotron saga continues...