

## THE RED CROSS AND NEW DEVELOPMENTS IN BLOOD TRANSFUSION

by Z. S. Hantchef

Although mention of blood transfusion dates back to the origin of medicine, it may be said that the genuine history of transfusion starts at the beginning of our century.

Since then transfusion has passed through several decisive phases, but it is only in the past twenty years that it has made spectacular progress and has become one of the essential components of modern medicine.

During this period the main objective of those responsible for the preparation of blood was, as Professor Hässig has so aptly said, "to avoid complications". Therefore "to avoid haemolytic accidents, it was necessary to have recourse to modern blood group serology methods. In order to avoid accidents due to bacterial contamination of blood conserves, a hermetic approach had to be adopted. For quite a number of years, the main concern of transfusion centres was to guard against post-transfusion hepatitis. In spite of systematic research into the blood of all donors for the presence of the antigen of hepatitis B, this threat has not yet been removed".

Blood transfusion therefore has new openings in the future, in particular in the spheres of the judicious use of blood and its components, plasmapheresis, the employment of plasma substitutes, gamma-globulin treatment, haemotherapy through the preparation of coagulation factors and, finally, the use in large centres of modern electronic methods, that is to say automation.

Today it may be said that the new and rightful direction for blood transfusion, in its application and research, is in particular

that of immuno-haematology. While this has a promising future, concerning research on systems of tissular histo-compatibility for example, considerable scientific equipment is required. However, every transfusion centre must ensure its harmonious development in line with its vital mission, namely the supply of the blood and its derivatives needed for the survival and treatment of the sick. The large increase in demand for blood in all countries makes it even more necessary in these conditions to concentrate special attention on the blood donor and blood collection. This is the fundamental basis of the mission of transfusion centres.

The considerable developments in blood transfusion call for a national blood programme in each country based on appropriate legislation or, failing this, special regulations. The hub of this programme is the organisation and structure of blood donor recruitment services.

Such a service is of undoubted importance within a transfusion centre. Who today could visualise a medico-surgical centre without its accompanying blood transfusion centre to provide blood on the basis of a donor service?

There can be no blood transfusion without blood donors, an organisation and a structure. This form of therapy is exceptional in that it is the only specialised medical field involving a direct bond between the doctor, the donor and the receiver.

Stress should here be laid on the role falling to voluntary organisations, such as the Red Cross, other humanitarian and cultural movements, blood donor associations and friendly societies. To avoid wasted effort, this role is dependent on prior agreement and close co-operation with the services responsible for transfusion. Through its federative mechanism, the League helps and encourages National Red Cross Societies to support the efforts of their Governments and to assume responsibilities within the national service. Blood, a therapeutic product of human origin, must not—as can be readily realised—entail any commercial profit. That is why the Red Cross—which has undoubted moral prestige in the eyes of the public—is perhaps the ideal and most logical organisation to undertake blood donor recruitment throughout the world.

Red Cross bodies had already realised the full importance of transfusion at a time when it was still in the embryonic stage. The

Red Cross did pioneer work from 1921 by establishing its first blood transfusion centres in Great Britain, the Netherlands and Australia. At the end of a period which had seen the creation of many transfusion centres, the XVIIth International Red Cross Conference meeting in Stockholm in 1948 with the participation of all National Societies and Governments asked in Resolution No. XLVII that the principle of the free gift and receipt of blood be as far as possible universally applied.

In the light of the importance of this question and of the recent increase in certain commercial transactions, the XXIIInd International Conference of the Red Cross (Teheran, 1973) adopted a resolution reading as follows

*affirms that a service based on voluntary blood donation, motivated by humanitarian principles, is the safest and most effective way of supplying blood needs,*

*urges the Governments of all nations to adopt the highest standards for a safe blood service to their citizens and formulate those standards on the concept of non-remunerated blood donation,*

*recommends each National Society and its Government to undertake a strong combined effort to attain the humanitarian objectives of a total national blood service based on the broad voluntary participation of the people.*

Almost at the same time the Council of Europe (CE) brought the conclusions of its Sub-Committee of Specialists on Blood Problems (Nicosia, 1973) to the notice of its member countries. The Sub-Committee

- *draws the attention of Member Governments to the undesirable effects resulting from the commercialisation of blood and its derivatives,*
- *recommends that all collection of blood, including plasmapheresis, should only be undertaken by Government organisations or organisations working on a non-profit basis, with the authorisation of the Government. Blood donations should preferably be on a non-remunerated basis,*

- *recommends to Member Governments that all activities relating to blood transfusion should be the responsibility of physicians,*
- *recommends, finally, that all such activities be subject in all member countries to legislation or, failing this, to official regulations or recommendations. Such provisions should be based on the non-commercialisation of blood and on medical responsibility.*

At present the Red Cross participates in the national transfusion programmes in 95% of all countries. It assumes responsibilities in 112 of them in the spheres of recruitment and promotion of the free gift of blood. In 58 countries it collects blood and has transfusion centres and mobile units, whereas in 16 of them it is fully responsible for the national blood programme.

For its part, the League of Red Cross Societies—the World Federation of National Red Cross, Red Crescent and Red Lion and Sun Societies—has set itself the task of helping its member Societies to develop their activities in the field of blood transfusion. In order to be more familiar with local conditions and to give more effective assistance, it has in different regions of the world obtained the co-operation of consultants specialising in blood transfusion. They constitute the League's Group of Red Cross Experts in this sphere. The Group has in particular recommended a sponsorship system between sister Societies in order to promote the development of their transfusion programmes. Through the intermediary of the League and whenever possible, experts are sent to the spot (very often in co-operation with WHO). Fellowships and study visits are offered by Red Cross Societies, with responsibilities within the national blood programme of their countries, to sister Societies wishing to establish or develop activities in the field of transfusion. Enquiries and studies are undertaken. Finally, regional seminars and other technical meetings are organised.

Taking into account the wishes expressed by several National Societies, the League has moreover decided to devote World Red Cross Day 1974 (8 May) to the gift of blood with a view to promoting unpaid voluntary blood donation throughout the world

and to contributing to increasing the number of donors. The documentation kit prepared for World Red Cross Day under the slogan "Give blood... Save life" in particular comprises the statements of many international personalities and eminent transfusion specialists, as well as a colour chart illustrating Red Cross transfusion activities in the whole world. Finally, as audio-visual means are now the best information aids, a colour sound film—but with no dialogue—of a running time of 13 minutes, entitled "Blood is red all over the world" was co-produced by the League, the Hungarian Red Cross and the Bulgarian Red Cross. This film, shot on four continents, has already been widely disseminated and been shown by the television channels of many countries.

At both national and international levels, there is close cooperation between the Red Cross and governmental organisations, such as the World Health Organization, the Council of Europe, as well as non-governmental organisations, like the International Society of Blood Transfusion and the International Federation of Blood Donor Organisations, with the aim of developing at the same time transfusion, donor and recruitment services.

In spite of all efforts, the major concern, often critical, of every transfusion centre is still how to find donors in sufficient numbers to meet the never equalled increase in the need for blood. This would justify an appeal to the whole population. The rise in demand of the order of 8 to 12% per annum in certain countries raises the problem of the recruitment of new donors and above all that of the renewal of donors, where unfortunately progress stands at 5 to 6%.

To cope with this ever growing demand for blood and its derivatives, the transfusion centres endeavour to collect increasingly large quantities and therefore to appeal to an ever bigger number of voluntary donors to be found in a restricted section of the population. Why restricted? Because an enquiry we conducted under the direction of Dr. Cagnard on blood donor motivation—which was submitted to the Red Cross Seminar at the Xth Congress of the ISBT held in Stockholm in 1964—showed that among adults in many countries only one person out of five, i.e. 19%, had given his blood and that the majority (81%) had expressed great fear about the gift of blood. On studying the attitudes and opinions

of the age group around 20, that is to say the generation to take over, it can be seen that there is here the strongest resistance to blood donation. It may be asked whether this is not due to a lack of information and a bad approach.

This scarcity of donors and resulting shortage of blood may be temporarily remedied by new technical procedures, such as:

- the use of double or triple plastic bags, for example making it possible on the basis of a single unit of blood to supply three different patients with: red corpuscles for anæmia, platelets against thrombopenia, with the surplus plasma being used as cryoprecipitate having the anti-hæmophilic factor A or possibly being fractionated;
- the extension of this fractioning to give a patient the fraction he needs for his treatment;
- plasmaphereses which make it possible, under good medical control and therefore without anæmia, to multiply the annual gifts of blood of one person by ten and more and to cope with ever larger needs for specific gamma-globulin, immune serum tests and concentrates of coagulation factors.

Here mention must be made of other topical problems facing transfusion services: those of the specificity of the donor and of the iso-group transfusion, that is to say the possibility of transfusing theoretically compatible blood. The blood of the donor, extensively analysed (often at considerable expense), phenotyped, etc., must be preserved for specific cases.

In addition, contrary to the practice a few years ago, these new technical procedures require these categories of voluntary donors to make greater sacrifices, notably in the form of manifold trips and longer stays at the transfusion centre at fixed times and places.

How can voluntary service be maintained? It is necessary to decide on a policy which—while keeping voluntary service—does not harm the donor. If the mission of transfusion centres is to ensure a supply of blood products essential for public health, their main concern must always remain the protection of blood donors in all circumstances. As Professor Soulier has stressed, this is

especially vital when it is a question of voluntary unremunerated donors, a category into which virtually all donors fall. At this point the following problems arise: medical supervision of the donors, their legal protection and the fight against trade in blood. Considerations of yield should in no way take precedence over the security and well-being of the donor.

Finally, it none the less remains true that officials in charge of transfusion would have every interest in at the same time promoting medical transfusion education with a view to the optimum use of blood and its derivatives in order to avoid wasting blood at the other end of the transfusion scale.

It is above all since 1967 that this medical education, covering indications and the maximum use of blood and its derivatives, has been the subject of a series of meetings: Paris, Amsterdam, Helsinki and Dublin. It occupied an important place in the discussions which took place during the Blood Transfusion Congresses in Moscow (1969) and Washington D.C. (1972).

This series of topical problems faces those in charge of transfusion at each centre and within every blood donor service. It is our task to cope with them by trying to find solutions.

It however remains clear that the best equipped transfusion centre with highly qualified personnel can only function thanks to the blood given. The technical equipment would have no meaning and would lose its effectiveness without the voluntary cooperation of very many blood donors. If their gesture has become anonymous, it has nevertheless kept its full value. And this gesture, to which the Red Cross is firmly attached, is to be found throughout the history of transfusion.

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