HOMOLOGOUS BLOOD TRANSFUSION : DO WE HAVE ANY ALTERNATIVE?

Dear Editor,

This is in reference to the original article on the subject of alternatives to homologous blood transfusion by Lt Col S Gokhale [1]. There are a few comments and observations I would like to offer :

(i) Non Utilisation of Autologous Blood : The author has recommended that blood drawn for Autologous Transfusion (Preoperative autologous donation - PAD) should be transfused to the same patient and not to any patient, to avoid legal, ethical and moral tangle. However, Silvergleid recommends that although autologous blood is relatively safe it has got rare (fortunately) risks like hemolysis due to improper handling, chances of bacterial contamination, misidentification and pulmonary oedema due to hypervolemia. Transfusing to replace blood lost during donation, to promote wound healing or general well being, or to normalise the Hb level is of arguable benefit and should be avoided. Should anticipated blood loss not occur, PAD becomes a risk, rather than a benefit and should be avoided. The most tangible benefit of this procedure is the generation of additional blood units from a group, which otherwise would have been unavailable [2]. As per our experience with PAD, blood collected was often not utilised and was instead used to increase our inventory. This has also been advocated by Machave et al [3], in their editorial article. In cases of Acute Normovolaemic Haemodilution - ANH, blood has to be retransfused to the patient after surgery. But in case of PAD, retransfusion should be guided solely by clinical indication and justification.

(ii) Screening of Autologous Blood : The most obvious benefit of the predeposit programme is freedom from concern about the infectivity of the blood and thus its safety [2]. But as per our experience (although limited), screening does help, given the constraints of our setup. Since these patients are invariably cases for planned surgery, if any of the autologous units turn out to be positive for HIV or HbsAg, the risks of surgery should be weighed against the benefits.

(iii) Single Unit Transfusions : I agree with the author, that single unit transfusion, although has nil value, is being practised rampantly. As per the consensus of the Armed Conference of the Indian Society of Hematology and Transfusion Medicine held in Pune (Dec 1999), single unit transfusion is to be abolished. It should be understood that transfusion is not a placebo, and has got its inherent problems of transfusion transmittable disease, sensitization and transfusion reactions [4]. Thus, be it homologous transfusion or autologous transfusion, blood should be issued only if indicated and single unit transfusions should be discouraged.

(iv) The author has mentioned that ANH can be practised in service hospitals for benefit of Blood Bank facilities. But presently, as per the Drugs and Cosmetics Act - 1940 (amended 1955, 1960, 1962, 1972, 1992, Apr 1999), no transfusion can be undertaken without a valid license, be it in routine cases or in emergencies [5]. This is applicable to all services setup, including Corps Blood Supply Units, which are to operate in far flung operational areas.

References

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3. Machave YS. Autologous transfusion. The safer alternative. *MJAFI* 2000;56:93-4.
4. Badami KG, Suryanarayan A. An audit of blood requisition forms. *Ind J Hemat & Blood Transf* 1999;17 [Supplement No.1] 25-6.
5. The Gazette of India : Extraordinary - Part II - Sec 3 (i). Ministry of Health and Family Welfare (Department of Health) Notification dated 5 April, 1999; 28-65.

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REPLY

Maj Prabal Deb has made very important and interesting comments. Autologous blood transfusion is not widely practised, hence the experience is limited. Every observation and comment, therefore, is educative. We would like to clarify certain aspects :

(i) No intervention, whether blood transfusion or intramuscular injection is totally free from risk, howsoever negligible the incidence may be. Autologous blood transfusion is no exception. The decision to intervene is to be made by the physician in good faith weighing the benefits against the risks. The risks (haemolysis, contamination, pulmonary oedema etc.) as brought out by Maj Prabal Deb, remain same whether the blood is transfused to same patient or diverted to another. If the patient doesn't require blood, transfusion should be avoided. On the other hand if the patient is not expected to need blood transfusion, his blood for autologous blood transfusion should not be withdrawn in the first place. Proper case selection is of utmost importance. Using PAD blood to increase inventory of the blood bank is not recommended. If the PAD blood is often diverted to other cases, patients may suspect intentions of doctors advising PAD. Many patients might refuse autologous blood transfusion if they realize that their blood is being diverted to other patients.

(ii) Screening of blood for autologous transfusion does furnish

additional information about HbsAg, VDRL and HIV status of the patient. How to use this information is up to the physician concerned. However, patient's confidentiality must always be kept in mind.

(iii) Single unit transfusion though looked down upon by blood bank staff, is still very much in vogue. When benefits outweigh risks (as some physicians feel), it is resorted to. Recommending eliminating single unit transfusion is easier than practising it in a general hospital.

(iv) The relevant parts of Drugs and Cosmetics Act -1940 deal with Blood Bank and its licensing. This act was then amended to eliminate professional blood donation and mushrooming spurious blood banks. It is aimed at providing safe blood and blood products for transfusion. Whether ANH should be considered blood banking is still debated. Its interpretation should be governed by the spirit of the act and not by letter. Comments on this aspect of ANH are invited.

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