Preoperative Autologous Blood Donation (PABD) Reference Guide

In the elective surgical setting, preoperative autologous blood donation (PABD) is a convenient, predictable, safe and widely practised form of transfusion support.

1. What is autologous blood donation?
   Autologous blood donation is blood donated from an individual and stored in refrigerator with appropriate temperature, then be given back to that individual should the need for transfusion arise. Blood can be stored for up to 42 days between collection and use.

2. What are the advantages of autologous blood donation?
   Autologous blood donation has the advantage over blood from other individuals in that it is incapable of stimulating antibodies to red cells, white cells, platelets and plasma proteins. It also carries no risk of transmitting infections such as hepatitis or HIV. However, the very small risk of bacterial contamination at the time of collection is the same as for any blood donation.

3. What are the disadvantages of autologous blood donation?
   In general, donation for autologous transfusion has the same minimal risk as any blood donation. There is also a minimal risk, as with any transfusion, that blood other than one's own may be transfused accidentally.

4. How many units of autologous blood may be donated?
   As many as five units may be taken at approximately weekly intervals before the planned for surgery.

5. How long does the procedure take?
   Collecting a donation takes about 30 minutes each time, after which the patient will be asked to rest for 15 minutes before leaving. Therefore, whole the procedure for autologous blood donation will take about 60 minutes (including registration).

6. Practical Aspects of PABD Collection
   1) PABD should only be considered for those elective surgical procedures with a reasonable expectation that blood will be transfused.
   2) PABD cannot be made available to all patients, since it requires a starting haemoglobin \( \geq 11\text{g/dl} \) which effectively excludes most emergency surgery.
3) Blood should never be taken from patients whose haemoglobin is 10 g/dl or lower.
4) Patients less than 45 Kg are not allowed to do the PABD collection in Macao.
5) As part of a transfusion strategy, its use carries the same risk of collection, storage, identification and administration errors as allogeneic blood, but it does avoid the immunological and viral hazards of allogeneic transfusion.
6) Preoperative autologous blood donation programme should be offered only when it is possible to guarantee hospital admission and operative dates, as donated blood has a limited storage life of 42 days.
7) Blood should not be drawn more often than once a week with the last donation at least 4 days (preferably a week), before surgery.
8) Because of the need to collect several units of blood within a period of a few weeks, it will be necessary for the patient to take an iron supplement.
9) Blood collected for autologous transfusion should not be transfused to another patient.

7. The following should not be considered for PABD
   1) Patients with virological markers which indicate infectivity for HBV, HIV or HCV.
   2) Active bacterial infection.
   3) Patient’s haemoglobin < 11 g/dl.
   4) Patient’s weight < 45 Kg.
   5) Patients with significant aortic stenosis, prolonged and/or frequent angina, significant narrowing of the left main coronary artery and cyanotic heart disease.
   6) Patients with a history of epilepsy.
   7) Patients who have been blood donors and sustained a delayed faint.
8. **Procedure for Preoperative Autologous Blood Donation**

The request for PABD should be made by clinicians and presented to the physicians at Macao Blood Transfusion Service (MBTS) by the patient in person. The physician at MBTS will arrange a schedule for the patient to make PABD at the MBTS.

Please call 87914335 to contact a MBTS physician for details.

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**Reference:**


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