

PREOPERATIVE AUTOLOGOUS BLOOD DONATION IN 2005: EXPERIENCE OF A BLOOD CENTRE IN PARIS REGION.

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Background: Preoperative autologous blood donation was developed to reduce allogeneic blood exposure, risk of transfusion adverse events and requirement of blood donors. The aim of this work was to present our experience and analyse the evolution of this practice in Paris.

Methods: Patients were selected from private and public orthopaedic centres (hip and knee arthroplasty, scoliosis). The collections were performed in our blood centre using red blood cell apheresis (RBCA) or repeated preoperative autologous donation (PAD).

We analysed: 1) For the entire orthopaedic department, the number of patients and autologous RBC collected by the 2 techniques (table 1); 2) For Cochin group hospital the transfusion of the patients (table 2).

Results: During 2005 we received 48% less patients than in 2002. The percentages of patients collected by the 2 techniques were the same than in 2002 (65% RBCA and 35% PAD). For the patients hospitalized in Cochin Group, we performed 76.2% RBCA with an average of 2.1 RBC unit per patient and 23.8% PAD with an average of 1.8 RBC per patient.

45/294 (15.3%) patients were ABO Rhesus negative and did not need allogeneic blood. Globally, 102/604 (16.8%) RBCA collected were not transfused. However 38 patients (12.9%) needed 116 allogeneic RBC (RBCA: 12.5%, PAD: 14.3%). We observed as others that the RBCA patients who required autologous and homologous blood had lower predonation Hb level in average ($13 \pm 0.8\text{g/dl}$ vs $14 \pm 0.9\text{g/dl}$). This was not the case with PAD patients.

Conclusion: The very low residual risk of allogeneic transfusion has induced a decrease of these techniques during the 3 past years. PAD and RBCA both avoid allogeneic transfusion: 83.2% of patients were transfused only with autologous blood. Predonation Hb level is a predictive factor of allogeneic transfusion.

Year	Patients addressed	Patients included			RBC collected		N RBC/patient	
		Total	RBCA	PAD	RBCA	PAD	RBCA	PAD
2001	1518	1407	682 (48%)	725 (52%)	1702	1392	2.5	1.9
2002	1411	1373	930 (68%)	443 (32%)	2218	954	2.4	2.1
2005	675	626	410 (65%)	216 (35%)	859	467	2.1	2.2

Patients Groupe Cochin hospital	Number	Hb predonation g/dl	RBC collected	RBC not transfused	Allogeneic RBC
RBCA 224 patients 116M-140F	196 patients (87.5%) 102M-94F	14 = 0.9	416 (2.1 patient)	74 (17.8%)	0
	28 patients (12.5%) 13M-15F	13 = 0.8	60 (2.1 patient)	0	94
PAD 70 patients 17M+53F	60 patients (85.7%) 14M-46F	13 = 1.3	109 (1.8 patient)	28 (25.6%)	0
	10 patients 3M-7F	13 = 0.9	19 (1.9 patient)	0	22
Total 294 patients	294 patients 133M-193F	13.6 = 1.0	604 (2.1 patient)	102 (16.8%)	116