

In The Face Of High HIV Prevalence, How Ready Are Surgical Patients For Autologous Blood Transfusion In The Middle Belt Region Of Nigeria?

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Citation

O E Iduh, A E Abayomi. *In The Face Of High HIV Prevalence, How Ready Are Surgical Patients For Autologous Blood Transfusion In The Middle Belt Region Of Nigeria?*. The Internet Journal of Surgery. 2016 Volume 33 Number 1.

DOI: [10.5580/IJS.32217](https://doi.org/10.5580/IJS.32217)

Abstract

Background: the advent of HIV has raised anxiety over allogeneic blood transfusion amongst patients and caregivers alike. In an environment with a HIV prevalence rate of 12.7%, we set out to study the attitude and willingness of surgical patients to use autologous blood transfusion.

Materials and methods: All new patients presenting to the SOPD of the Federal Medical Centre, Makurdi, Benue State, Nigeria from January 2012 to June 2012 who gave a verbal consent to participate in the study were given a 25 item structured self-administered questionnaire and the results inputted and analysed using IPSS version 16 software.

Results: Seventy four out of one hundred and twelve questionnaires administered had complete information for analysis. Only 32.2% of respondents were previously aware of autologous transfusion in whatever form. Majority (93.2%) were aware of the dangers of allogeneic blood transfusion.

81% of respondents agree the use of autologous transfusion will prevent the risk of infection transmission. 85.1% have a positive attitude to autologous blood transfusion and are willing to have their own blood transfused in the event of elective surgery.

Conclusion: majority (85.1%) of surgical patients are willing to undertake autologous transfusion in this region of high HIV prevalence.

INTRODUCTION

The advent of HIV has heightened the concern about transmission of blood-borne infections through allogeneic blood transfusion amongst patients and care-givers (1).

The rising incidence of HIV and hepatitis B and C has greatly reduced the number of potential blood donors for allogeneic transfusion. This has necessitated the need for autologous blood donation where feasible, a practice that is on the increase in Canada (2).

Autologous blood transfusion has been validated to have an important role in the developing world as a result of the rising HIV and Hepatitis C incidences (3).

Patients may choose autologous blood donation to avoid the risk of allogeneic transfusion (4) but physician's

recommendation has been identified as the key factor in patient's decisions to participate in the preoperative autologous blood donation (5).

Benue state of Nigeria according to the 2010 HIV sentinel survey has a prevalence rate of 12.7%, the highest in a country of over one hundred and sixty million population (6).

MATERIALS AND METHODS

All surgical patients presenting in the surgical outpatient department (SOPD) of the federal medical centre, Makurdi from January 2012 to June 2012 who gave a verbal consent to participate were included in the study.

A 25 item structured self-administered questionnaire was administered to them and the results inputted in a computer

data base and analysed using SPSS version 16 software.

RESULTS

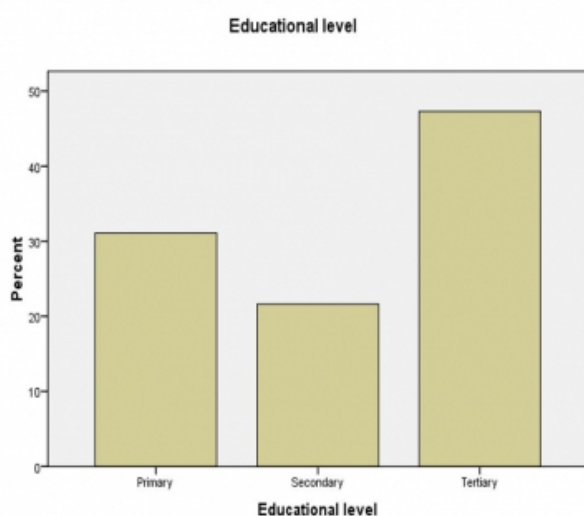
A total of one hundred and twelve questionnaires were administered but seventy-four had complete information for analysis.

Age range of patents is 17-85 years with a mean of 41 years. Fifty nine respondents (79.7%) were males while fifteen 20.3% were females. 72 respondents 197.3%) were of the Christian religion while 2 (27.97 were Muslims. Amongst the Christian respondents 45(62.5%) were Catholics while 25(34.7%) and 2 (2.8%) were protestants and Jehovah's witnesses respectively.

All respondents have some form of formal education with 31.1%, 21.6% and 47.3% representing the primary, secondary and tertiary levels respectively (fig I).

Figure 1

Respondent's educational level



Fifteen (20.1%) respondents have had previous allogeneic blood transfusion. 11(73.5%) for emergency operation while 4(26.7%) were transfused for low blood level.

Nineteen respondents (25.7%) had donated blood voluntarily in the past for allogeneic transfusion.

With respect to awareness 24 (32.4%) are aware of autologous blood transfusion while 50 (67.6%) are not aware.

Majority (93.2%) of respondents are aware of the dangers of blood transfusion.

Infection was the major danger of blood transfusion in the opinion of 47 (68.1%) of respondents.

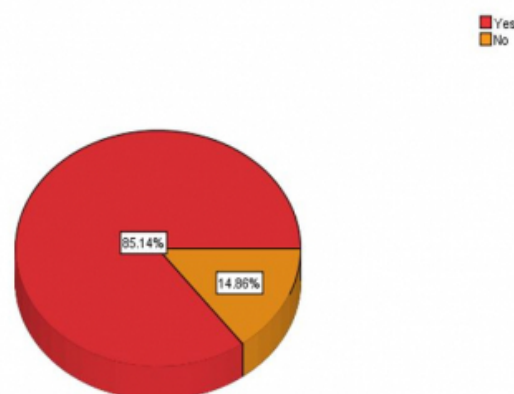
Sixty (81.0%) respondents agree that the use of autologous transfusion will prevent the risk of infection transmission.

Sixty three (85.1%) patients have positive attitude to autologous blood transfusion as they are willing to consent to an autologous transfusion in the event of an elective surgery (Fig. II).

Figure 2

Patient's willingness to undergo autologous transfusion

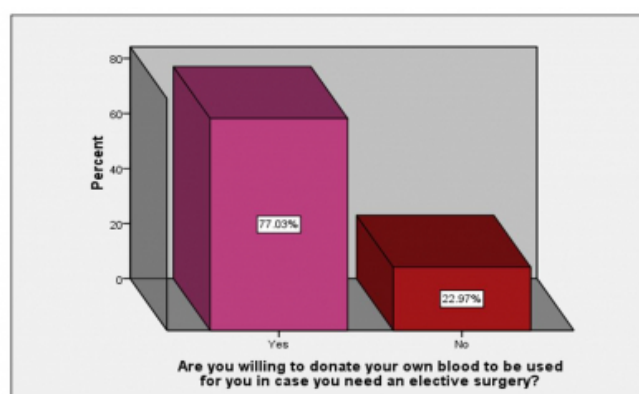
Will you accept your own blood to be used for you in case you need an elective surgery?



57 (77.03%) are willing to undertake pre-operative autologous blood donation (Fig. III).

Figure 3

Patient's willingness to undergo preoperative blood donation



DISCUSSION

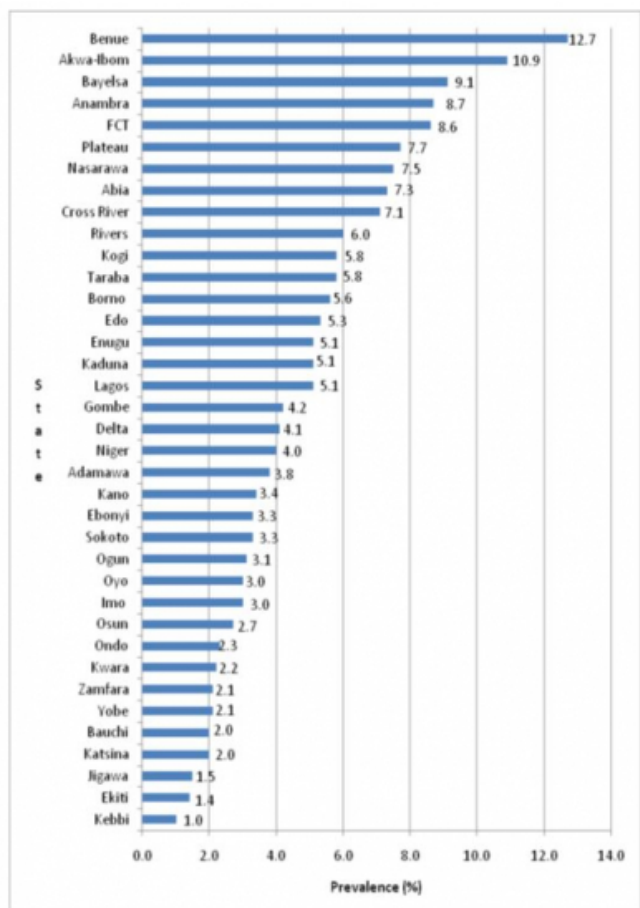
Autologous blood transfusion is the collection and subsequent reinfusion of the patients own blood or blood components (7).

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Benue state of Nigeria where this study was conducted has a HIV prevalence rate of 12.7% according to the 2010 sentinel survey (Fig IV).

Figure 4

HIV Prevalence by State (HSS 2010)



A high HIV and hepatitis prevalence rate has a negative impact on the allogeneic donor population while HIV and AIDS on their own have been established to have increased the burden on blood bank reserves in north east Nigeria (8).

Majority of patients (93.2%) in this study are aware of the dangers of blood transfusion with infection considered the most Worrisome in the opinion of 68.1% of respondents. This is comparable to the study by F. Curry Grant et al where transmitted viral infections were considered a major risk by 90% of respondents.

87% of respondents agree that the use of autologous transfusion will prevent the risk of infection transmission while in the study by McCarty et al amongst orthopaedic patients, 54% of respondent's favoured autologous transfusion (9).

In this study, 85.1% of respondents are willing to have autologous transfusion in the event of an elective Surgery as opposed to the 69% who preferred it for open heart surgery in the study by F Curry Grant et al. The preference rate in their study however increased to 76% after administration of a decision aid (10).

The use of such a decision aid in this environment with high HIV prevalence may further enhance patient's acceptability of autologous blood transfusion.

This will require education on the part of physicians as physician recommendation has been identified as a key factor in patients decision to participate in preoperative autologous blood donation.

ACKNOWLEDGEMENT

We wish to thank the entire staff of the Surgical Outpatient Department of Federal Centre, Makurdi for their helping to administer the questionnaires.

References

1. Forgie MA, Wells PS, Laupacis A, Fergusson D. Preoperative autologous donation decreases allogeneic transfusion but increases exposure to all red blood cell transfusion: results of a meta-analysis. *Arch Intern Med* 1998; 158:610-6.
2. Moltzan C, Proulx N, Bormanis J, Lander N, Degroot H, Rock G. Perceptions and motivations of Canadian autologous blood donors. *Transfus Med*. 2001 Jun; 11(3):177-82.
3. Dhingra-Kumar N, Sikka M, Madan N, Sood SK. Evaluation of awareness and utilization of an autologous blood transfusion programme. *Transfus Med*. 1997 Sep; 7(3):197-202.
4. Moxey AJ, O'Connell DL, Treloar CJ, Han PY, Henry DA. Blood transfusion and autologous donation: a survey of post-surgical patients, interest group members and the public. *Transfus Med*. 2005 Feb; 15(1):19-32.
5. Ferguson KJ, Strauss RG, Toy PT. Physician recommendation as the key factor in patients' decisions to participate in preoperative autologous blood donation programs: Preoperative Autologous Blood Donation Study Group. *Am J Surg*. 1994 Jul; 168(1):2-5.
6. Federal Ministry of Health: 2010 Technical Report; National HIV Sero-prevalence Sentinel Survey among Pregnant Women Attending Antenatal Clinics in Nigeria.
7. Sansom A. What is autologous blood transfusion? *Br J Theatre Nurs*. 1993 Jul; 3 (4):22-4.
8. Ahmed SG, Ibrahim UA, Kagu MB. The burden of HIV and AIDS on blood bank reserves in northeast Nigeria. *Trans R Soc Trop Med Hyg*. 2007 Jun; 101(6):618-20. Epub 2006 Dec 18.
9. McCarthy T, Mullett H, Carey M, Burke TE. Irish orthopaedic patients' attitudes to blood transfusion. *Ir Med J*. 2001 Apr; 94(4):110-1.
10. F. Curry Grant, Andreas Laupacis, Annette M. O'Connor, Fraser Rubens, and James Robblee Evaluation of a decision aid for patients considering autologous blood donation before open-heart surgery *CMAJ*. 2001 April 17;

164(8): 1139–1144.

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