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UK CELL SALVAGE ACTION GROUP
NEWSLETTER

INSIDE THIS ISSUE:

Editorial:

This is the Ninth in a series of newsletters to update cell salvage users with the activities of the UK Cell Salvage Action Group.

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We would welcome any feedback on the content of this newsletter.

2014 Survey of Intraoperative Cell Salvage in the UK

In 2006, The UK Cell Salvage Action Group (UKCSAG) was established to support the wider implementation of cell salvage as an alternative to donor blood and to facilitate a UK approach to its use. In the intervening years a Toolkit, including a range of education materials, has been developed.

To monitor uptake and implementation of intraoperative cell salvage (ICS) across the UK, a survey was conducted in 2007 and repeated in 2010. Improvements were seen in the areas of competency assessment, ICS policy implementation and uptake of ICS across specialities. However, it was also found that quality control of both operators and machines remained an issue. This survey was repeated in 2014 to evaluate progress with the implementation of ICS and to identify areas for improvement.

Aims

- To evaluate progress with implementation of ICS
- To identify remaining obstacles to the implementation of an ICS service
- To measure the success of the Toolkit supplied by the UKCSAG
- To gain an overview of how training for ICS is being delivered and by whom
- To compare the specialties where ICS is being used in 2014 compared to 2010
- To help focus the future work priorities of the UKCSAG

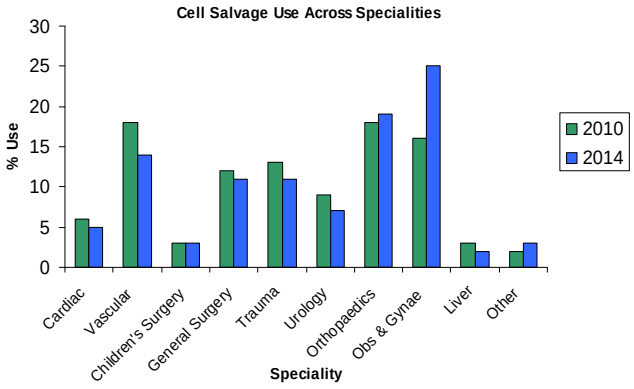
Method

Questions were formulated by an iterative process and also based on previous surveys carried out by the UKCSAG. The survey was conducted as an online exercise using SnapSurveys© software. Answers to each question were analysed proportionately (n, %).

Results

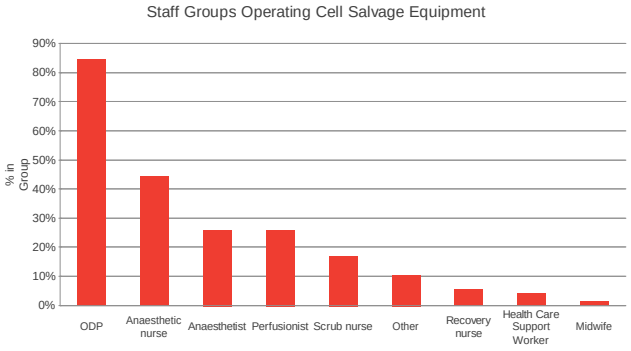
137 hospitals from all 4 countries in the United Kingdom responded to the survey. It identified new trends in ICS implementation. Some areas identified in the 2010 survey remain a challenge. Key findings:

- Level of ICS use (compared with 2010 survey) within each specialty is relatively unchanged other than obstetrics and gynaecology where use has increased
- There is a trend towards outsourcing of ICS services
- Shift to ICS becoming mainstream practice with 'out of hours' cover being provided by 'on duty' staff rather than 'on call' or dedicated operators
- Comprehensive training of ICS operators remains a challenge
- Between 50% and 60% of respondents said they did not quality control the machines or the operators
- 13% of respondents are using "addressographs" to label salvaged blood rather than the recommended label



Conclusions

- The requirement for, and provision of ICS should be reviewed/audited by every HTC/PBM committee and be part of the programme for Patient Blood Management / Better Blood Transfusion to be fully integrated into patient care
- All ICS training received should be competency assessed
- The use of addressograph labels introduces additional risk and is discouraged
- Documentation on the ICS Toolkit should be systematically reviewed and updated by the UKCSAG.



SALVO Study

This cell salvage trial in obstetric patients is investigating whether the technique reduces donor transfusion as its primary endpoint. Twenty three units in the UK are participating and it is the only study worldwide looking at this aspect of maternity care. It started in the May 2013 and required recruitment of 3050 patients. Half of the patients were to be emergencies. Recruitment of elective caesarean patients was rapid but slowed once recruitment was restricted to only patients requiring emergency sections or those with abnormal placentation. In Autumn 2014, patients who were comfortable with epidurals could be included in an effort to improve recruitment but even with this change in protocol, as of end of March 2015, recruitment had reached only 1977 patients. This meant that the target of 3050 patients would not have been achieved by the original end date of May 2015. However, an extension of 13 months or target being met, whichever is sooner, has now been granted.

One of the interim findings of the study is that swab washing significantly increases the volume of salvaged blood.

Dr Vicki Clark, Consultant Anaesthetist

Minimum Standards for Quality Assurance and Control

The UK Cell Salvage Action Group have produced some guidance setting out the minimum recommended standards for quality assurance and control checks of the end product in intra-operative cell salvage (ICS).
As an absolute minimum we recommend that all ICS machines are maintained and serviced as recommended by the manufacturer or preferably through a service contract with the manufacturer.

Other key Aspects of Quality Assurance and Control in ICS include:

- Frequency of sampling from machines
- Sampling methods and equipment
- Sample labelling
- Investigations and associated actions
- Personnel involved

For more information see:
www.transfusionguidelines.org/transfusion-practice/uk-cell-salvage-action-group/framework-for-service-provision

Why should we wash swabs?

The value of intraoperative cell salvage, both in terms of its clinical and cost effectiveness, is enhanced when the efficiency of red blood cell (RBC) recovery is optimised. Regulation of suction pressure to avoid excessive haemolysis and rinsing of swabs/sponges are the only known techniques for maximizing efficiency of RBC recovery[1].
Blood loss to swabs during surgery has been estimated at between 30%[2] and 50%[3] of the total surgical blood loss. By washing swabs, the blood that is normally discarded can be collected and the overall efficiency of red cell recovery improved[4].

The successful implementation of swab washing relies on:

- Aseptic handling of blood soaked swabs
- Release of viable red blood cells using an IV grade 0.9% saline solution (no other solution is allowable for cell salvage)
- Consistent and appropriate handling of the washed swabs to elute as much of the red cell supernatant as possible whilst minimising red cell damage.

A technical factsheet on swab washing, developed by the UKCSAG, is available to download on the JPAC (Joint United Kingdom (UK) Blood Transfusion and Tissue Transplantation Services Professional Advisory Committee) website[5].

1. Waters JH, Williams B, Yazer MH, Kameneva MV. Modification of suction-induced hemolysis during cell salvage. Anesth Analg. 2007 Mar;104(3):684-7
2. Takaori M: Perioperative autotransfusion: haemodilution and red cell salvaging. Can J Anaesth. 1991; 38:604-7
3. Ronai AK, Glass JJ, Shapiro AS: Improving autologous blood harvest: recovery of red cells from sponges and suction. Anaesth Intensive Care 1987; 15:421-4.
4. Haynes SL, Bennett JR, Torella F, McCollum CN. Does washing swabs increase the efficiency of red cell recovery by cell salvage in aortic surgery? Vox Sang. 2005; 88 (4):244-8.
5. Technical Factsheets and FAQs at:

http://www.transfusionguidelines.org/transfusion-practice/uk-cell-salvage-action-group

Sarah L Haynes PhD, Autologous Transfusion Lead, UHSM

The UK Cell Salvage Action Group are continuously developing resources to help support cell salvage in the UK. If you feel there is an area of cell salvage in need of support, please contact the UK Cell Salvage Action Group with your suggestions.

The work from the UK Cell Salvage Action Group and contact details for group members are available on the Transfusion Practice Toolkit website - www.transfusionguidelines.org.uk