

## Enhancement of practice following the formation of a Belfast Health and Social Care Trust (BHSCT) intraoperative cell salvage user group

Fionnuala Lennon<sup>1</sup>, Shirley Murray<sup>1</sup>, Sheena Gormley<sup>2</sup>  
<sup>1</sup>Haemovigilance Department, <sup>2</sup>Department of Anaesthesia  
 Belfast Health and Social Care Trust

### Background

Intraoperative cell salvage (ICS) commenced approx 16 years ago within the BHSCT. To date we have acquired 10 ICS machines. Currently it is utilised for certain procedures in vascular, cardio-thoracic, obstetric, urological, trauma and orthopaedic surgery. It was noted that the service lacked cohesion, coordination and direction with a poor standard of education and competency in most areas as well as an inconsistent out of hours service. The Haemovigilance Team were instrumental in the establishment of a BHSCT user group in December 2009, following the appointment of a haemovigilance practitioner to the UK Cell Salvage Action Group (UKCSAG) to address many areas of concern.

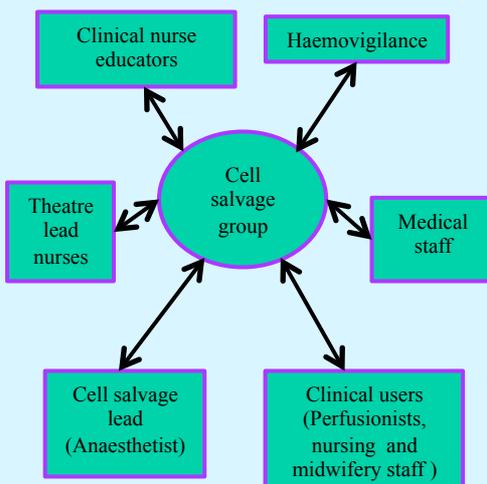
### Aims of the group

Terms of reference were agreed and the aims of the group were as follows:

- To promote and monitor the safe and appropriate use of cell salvage in BHSCT by sharing of best practice between user areas
- To develop and sustain programs of education and competency assessment
- To ensure quality improvement of the cell salvage service

In order to achieve these aims it was anticipated that the group would meet 4 times per annum.

### Membership of the ICS group



### Benefits and improvements

**Cell salvage lead:** To provide information, support and direction to assist in driving initiatives forward.



**Policy:** Trust policy to guide practice and to support the implementation and use of ICS.



### Quality Assurance

**Education:** To ensure that competent personnel in sufficient numbers are available to provide the ICS service, including out of hours. This has been achieved by:

- Theoretical training for all junior medical staff (anaesthetic and surgical)
- All user: Local theoretical training, learn cell salvage e- learning course, manufacture awareness training and education workbooks
- Practical training incorporating manufacturer led sessions followed by supervised practice, completion of competency workbooks and finally competency assessments for all users
- Update training is also recommended



**Equipment:** To ensure operator maintenance programmes and regular company maintenance is common practice and also ensuring that decontamination protocols are formulated.



**Product Quality:** A pilot has been completed to test the end product in the laboratory setting to enable reasonable accepted reference ranges to be set. This will ensure that all machines used are delivering a safe and effective product.



### Monitoring and evaluation

Ongoing evaluation of our service in a number of ways.

#### Audit

The utilisation of audit to evaluate the service is paramount. Audit forms are completed for every case for which ICS is used. A database will be constructed which will enable us to promote and assist in the auditing of ICS both locally and nationally. This will ensure that the service can be examined, so that it is used to its maximum capacity, ultimately improving patient satisfaction and cost effectiveness for the Trust. Audit may also help identify other areas which could benefit from the use of ICS. Retrospective audit will allow assessment of donor usage in relation to the increased use of ICS.

#### Incident reporting

All potentially serious adverse events and serious adverse reactions are identified, investigated and reported within BHSCT and onwards to the Medicine and Healthcare Regulatory Authority (MHRA) and Serious Hazards of Transfusion (SHOT) as appropriate. Constructive corrective and preventative action can then be taken to improve the overall service. Monitoring also allows identification of user errors which can then be address via training.

#### Product Quality

Regular monthly monitoring of quality control samples ensures that they are within the agreed reference ranges and all machines are functioning within safe parameters. Monitoring the end product also highlights potential user errors.

### Conclusions

Intraoperative cell salvage and autologous transfusion is safe and effective at reducing allogeneic blood transfusion requirements, and is known to be cost-effective. The formation of the Belfast Trust intraoperative cell salvage user group has already enhanced practice and its work continues to be proactive and encouraging within this area.