Section 11
Unloading and Discarding

Aim

- To introduce the basic principles of unloading an Intraoperative Cell Salvage (ICS) machine and discarding ICS disposables

Learning Outcomes

- Identify *when* unloading of ICS machine and disposables is appropriate
- Determine the risks associated with the unloading phase
- Describe the appropriate procedure for safely discarding waste products and disposables that is compliant with your hospital policy

Introduction

At the end of an operation, or when it appears that no more blood will be collected, it is important to communicate with the surgeon and anaesthetist to ascertain that ICS will no longer be required before unloading the ICS machine. When it has been established that there will be no more blood collected:

- Ensure that any blood collected up to that point that is intended for washing and reinfusion, is processed.
- Ensure that salvaged red blood cells (RBCs) have been reinfused to the patient, or that the reinfusion bag is detached from the processing set (see Section 10).

The procedure for unloading disposables is specific to each type of ICS machine and will differ depending on whether you have set up for “collect only” or “full processing”.

Therefore, the manufacturer’s machine specific guidelines on unloading should be followed. The risks associated with this stage are similar irrespective of technical differences in unloading procedures.

Waste products of ICS include; IV normal saline (0.9% NaCl), anticoagulant, and non-RBC components of blood, in addition to contaminated consumables. There is always a risk that blood may be infected. Your hospital will have a procedure for disposal of biological waste/biologically contaminated material.

Standard precautions when handling bodily fluids should be used as per your hospital’s Health and Safety Policy.

Below is a list of generic steps involved in the unloading phase of ICS:

- Establish that the operation is over or that no more blood will be collected
- Ensure that all blood intended for processing *is* processed
- Ensure that all salvaged red cells are reinfused or that the reinfusion bag is detached from the processing set
- Complete the data collection sheet for ICS audit
- Refer to manufacturer's guidance for unloading (there may be an unload function)
- Switch off the power supply
- Dispose of the waste bag/waste bag contents according to local policy
- Close off all clamps and seal off any open ports and ensure that any open spikes are covered or removed
- Remove processing set from device and dispose of as clinical waste
- Wipe down the device and remove blood spillages in line with your local policy and the manufacturer's machine specific guidance

The specific technique for removing waste products from the disposable, or alternatively, for securing waste products within the disposable, should be discussed at the practical session and should be compliant with local hospital policy for disposal of contaminated biological waste.

Further Reading

- Organisation's Policies for Health and Safety and Dealing with Biohazardous Material (local)
- Manufacturer's ICS Machine Specific Guidance

Self Directed Learning

What protective clothing/equipment should you wear when performing the takedown stage of ICS in your hospital?

Where can you find your hospital policy for disposing of contaminated waste?

According to your local policy for disposing of contaminated waste, which of the following would be the correct procedure for disposing of ICS waste fluids in your hospital?

(Circle one or write a description)

a. Cut open the waste bag and insert solidifying gel/powder and put in clinical waste bag.

b. Aspirate waste bag contents into suction liners and discard as clinical waste.

c. Aspirate waste bag contents into suction liners and insert solidifying gel/powder and discard as clinical waste.

d. Empty waste bag contents into a bucket and pour down waste pipe in the sluice.

e. Seal the consumable set, ensure there are no leaks and place in rigid yellow biohazard containers.

f. Seal the consumable set, ensure there are no leaks and double bag using clinical waste bags.

Other, please describe:

In your local policy for dealing with blood spillages, what cleaning fluid should you use to clean blood spillages on the ICS machine?