2024 Drug-medication (Protamine)

Permission to print:	Yes
Category	Drug / Medication
Category 2	Protamine
Severity	Good Catch No Harm Incident
Description:	Upon rewarming the anaesthetist returned into the theatre and began to draw up the protamine in anticipation of weaning from bypass. At the same time a routine rewarming ABG and ACT (~600seconds) was performed. The glucose was high on the ABG and an insulin bolus/infusion was discussed. The consultant anaesthetist was working with a reg they weren't familiar with and was doing a lot of teaching during this time. At some stage the syringes were placed on a bench next to one another. Unfortunately, the protamine syringe was mistakenly picked up by one of the anaesthetic team and a small bolus of protamine was administered into the patient and then an infusion commenced. Whilst we were normothermic the cross clamp was still in position. Almost immediately after the infusion had commenced the anaesthetic team realised what had happened and clearly informed me of the error. They estimated a total of only 5ml had been administered and begun to draw back on the line as [I] immediately gave 10,000iu of Heparin based on an assumption of minimal administration. An ACT following this was still only 418 and I gave another 10,000iu restoring the ACT back to ~600. From behind the pump it looked as though they were setting up an insulin infusion and I'm really grateful for the honest and transparent communication that followed. It was absolutely terrifying the effect of ~5ml of protamine.
GOOD CATCH - what went well	The good catch is the culture of our theatres and being able to have open and honest communication
What could we do better	Delaying drawing up protamine till after termination of CPB or a formal procedure to safely isolate drawn up protamine.
Preventive actions	I have suggested not drawing up the protamine until we are off bypass, however we do not have the support from the entire anaesthetic team on this. We are investigating a possible Tupperware container as a pseudo lockbox for protamine syringes or similar alternatives. We are working towards formalising a policy but we aren't quite there yet, unfortunately there is a little bit of a culture of "I won't have that problem because… ”
Type of incident:	Management
Duration of incident:	seconds
Hospital incident file	No
Ext Authority Advise	No
Discussed with tea	Yes
Rule issue	Yes
Skill issue	Yes
Protocol issue	Yes
Team Issue	Yes
Violation	No
Patient outcome variance	Nil
Commentary	This near miss is the third report in recent weeks regarding protamine. PIRS has

previously received a similar report to this where protamine unintentionally administered during CPB, was discovered when clot was seen in the operative field. The suggestion of a "lockbox" for protamine drawn up prior to termination of CPB is a smart idea. Protocols for managing the drawing up of protamine are warranted. PIRS Ed