BARD

PICC / Midline Post Insertion Troubleshooting Guide

Problem	Difficult to Remove	Catheter Embolism	Catheter Occlusion
Common Causes	▪ Venospasm Vasoconstriction ▪ Thrombotic complication ▪ Infectious complication ▪ Catheter position ▪ Catheter malposition	▪ Breakage upon difficult removal	▪ Poor catheter maintenance ▪ Drug precipitate ▪ Lipid occlusion ▪ Hyper-coagulable states ▪ Increased intrathoracic pressure ▪ Blood reflux
Signs and Symptoms	▪ Resistance met at any point during the removal process	▪ Catheter not intact on removal (*note*: insertion measurement equal to removal measurement) ▪ Patient complaining of popping, burning or stinging sensation during flushing ▪ Profuse leakage of IV fluids from insertion site	▪ Persistent withdrawal occlusion ▪ Persistent high pressure alarms ▪ Visible precipitate/blood in external segment of catheter ▪ Sudden onset of occlusion or resistance following incompatible agents
Prevention	▪ Apply heat prior to removal ▪ Provide calm, patient approach ▪ Remove slowly	▪ Do not apply pressure or force on removal ▪ Instruct patient on care for their device ▪ Use 10 cc syringes for flushing or administration of any drugs	▪ Use proper positive pressure flushing ▪ Use adequate flushing volumes ▪ Adequate flushing after blood draws ▪ Be aware of drug incompatibilities

Nursing Intervention	▪ Stop if any resistance is met on removal
	▪ Do NOT FORCE or pull the catheter
	▪ Apply heat to entire extremity
	▪ Avoid digital pressure along the course of the vein
		▪ Apply tourniquet immediately
		▪ Confirm pulses distal to tourniquet
		▪ Do not completely occlude blood flow to the extremity
		▪ Notify the physician immediately
		▪ Initiate emergency transfer per physician
		▪ Do not remove the tourniquet until a physician is present
		▪ Obtain stat xray
			▪ Rule out mechanical obstructions
			  ▪ Empty IV bag
			  ▪ Infusion pump turned off
			  ▪ Kinked tubing
			  ▪ Closed clamp
			  ▪ Occluded injection cap
			  ▪ Occluded IV filter
			  ▪ Sutures are too tight around catheter internally
			▪ Using a 10 ml syringe attempt to aspirate the clot gently from within the lumen
			▪ Do not use force, guidewires or flushing to clear the catheter
			▪ Use a thrombolytic agent with physician order
			▪ Use sodium bicarbonate or hydrochloric acid for drug precipitates with physician order
			▪ Use 70% ethanol or sodium hydroxide for lipids deposits with physicians order

Possible Physician Intervention	▪ Persistent resistance may warrant radiographic studies	▪ Radiographic studies ▪ Venous countdown ▪ Transfemoral snare retrieval ▪ Thoracotomy	▪ Radiographic studies ▪ Order thrombotic agents for blood precipitate ▪ Order hydrochloric acid for acid drug precipitate ▪ Order sodium bicarbonate for alkaline precipitate ▪ Order ethanol or sodium hydroxide for lipid deposits

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