FOLEY CATHETER TAMPONADE OF INTERCOSTAL HEMORRHAGE IN PRETERM INFANTS

An 850-g female was born at 26 weeks’ gestation. Despite administration of surfactant and use of low-pressure ventilation strategies, the infant developed a right-sided pneumothorax. A chest tube evacuated the pneumothorax, but reaccumulated after its removal, prompting insertion of two additional chest tubes. During placement, the patient began to hemorrhage from the insertion sites. Coagulation studies showed prothrombin time of 23.8 and partial thromboplastin time >200 seconds. Persistent hemorrhage occurred for the next 48 hours, and the infant required 140 mL/kg packed red blood cells, 80 mL/kg fresh frozen plasma, 30 mL/kg cryoprecipitate, and several platelet transfusions. The cause of hemorrhage was believed to be a lacerated intercostal artery, damaged during chest tube insertion. It was decided that the best approach to control the bleeding was to apply direct pressure to the injured vessel while continuing to correct hematologic deficiencies. Under aseptic conditions, the chest tube was replaced with an 8-French Foley catheter. Once the catheter tip was positioned within the thoracic cavity, the balloon was inflated with 1.5 mL air and withdrawn against the chest wall to tamponade the injured vessel. This technique along with blood product replacement quickly stopped the patient’s hemorrhage and her pneumothorax resolved. Isotonic contrast media was instilled to visualize catheter placement (Figure). The remaining chest tube and Foley catheter were later removed without incident.

The use of balloon catheters for tamponade has been reported for gunshot wounds, neck wounds, liver trauma, abdominal trauma, and epistaxis.1-6 Because intercostal spaces in premature infants are small relative to chest tube caliber, extra care must be taken to prevent damage to intercostal vessels at the time of insertion. If this occurs, current management includes blood product replacement, packing with absorbent or prothrombotic material, or placement of sutures. In addition, our results suggest that a Foley catheter can be used to achieve hemostasis and intercostal tamponade in premature infants with excessive hemorrhage at thoracostomy sites.

**REFERENCES**


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![Figure. AP and lateral chest radiographs demonstrating the locations of the Foley catheter (arrow) and chest tube (arrow head).](image-url)