The Case

Two anesthesiologists were each responsible for the two separate renal transplant surgeries. The pharmacy had instructed the nurses to add 160 mg gentamicin to the irrigation solution for the newly transplanted kidney. The nurses had added the gentamicin to the irrigation solution at the time of surgery preparation and labeled the irrigation bag as "For Irrigation Only." However, the irrigation bags were not clearly labeled as "For Irrigation Only" and were stored in the same location as the intravenous fluids. The labeling on the bag was not conspicuous enough to prevent the anesthesia providers from confusing them.

In the first case, the irrigation duid was not clearly labelled as "For Irrigation Only" and was stored in the same location as the intravenous fluids. The labelling on the bag was not conspicuous enough to prevent the anesthesia providers from confusing them. In the second case, irrigation fluid was inadvertently spiked with the intravenous tubing. There was also no communication between the anesthesia care providers that this duid is intended for bladder irrigation rather than for intravenous therapy. Even if they recognize that 160 mg gentamicin has been added to the bag, they may still administer it intravenously.

Connecting the irrigation bag to the correct tubing when hanging it and using a dedicated irrigation pole labelled there.

Irrigation specific tubing and connectors should be employed whenever available. Designating a pole for irrigation duids should be avoided.

Adequate labelling and storage of irrigation solutions should be avoided.

Approach to Improving Safety & Patient Safety Target

Clear communication between staff members during the huddle and throughout the procedure is required. Irrigation bags should not be hung on a pole without being connected to appropriate irrigation-specific tubing and connectors. This color coding has been very helpful for anesthesiologists to prevent errors resulting in systemic absorption of gentamicin.

In the second case, the irrigation duid was clearly labelled as "For Irrigation Only" and was stored in the correct location. The labeling on the bag was conspicuous enough to prevent the anesthesia providers from confusing them. This drug is therefore particularly dangerous if it is erroneously administered intravenously.

A dose of 160 mg gentamicin is commonly administered intravenously by anesthesiologists or nurse anesthetists as prophylactic antibiotic therapy for urological procedures. The addition of this amount of gentamicin has also been associated with ototoxicity. The ototoxicity in the cases presented may be due to the systemic absorption of gentamicin after inadvertent intravenous administration. The newly transplanted kidney. Inadvertent intravenous administration of gentamicin in this clinical setting may result in acute kidney injury in orthopedic surgery.

Anesthesia providers must make sure that the irrigation bag is clearly labelled as "For Irrigation Only." A nurse-led approach to developing and implementing a collaborative system for developing safety improvement initiatives is recommended.

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Related Resources


Data