Rectal fluid administration for volume resuscitation in the austere environment

Rectal fluid administration has been shown to be effective and safe for rehydration of terminally ill cancer patients. This month in the wilderness club meeting we will review rectal fluid resuscitation and its use in the austere environment for resuscitation of the hypovolemic patient where intravenous resuscitation is not possible.

The case report we reviewed details a case of hikers in Nepal who encounter a patient with an upper GI bleed and do not have any equipment available for parenteral fluid administration. The patient is described as hypovolemic and has active hematemesis. The physicians placed a foley catheter into his rectum and administered several liters of rehydration solution, resulting in clinical improvement. Helicopter evacuation was unsuccessful due to weather conditions and the patient was evacuated by foot to the nearest medical center 2 days away. He received some intravenous fluid at that site and then was evacuated to a hospital the next day. He was found to have a hemoglobin of 2.2 g/dL and received blood products at that facility. Endoscopy revealed hemorrhagic gastritis. He recovered and was subsequently lost to follow up.

In a series of cancer patients receiving rectal fluid administration for dehydration, only 4 out of 78 patients discontinued therapy due to discomfort. In this series, a 22 French nasogastric tube was inserted 40 cm into the rectum and fluid was infused through it, with most patients receiving tap water

The main advantage of giving rectal fluid in the austere environment is the ability to give fluid with minimal equipment. There is no need to carry sterile fluids, which can be bulky and heavy, as any potable fluids can be given rectally.

In conclusion, consider rectal fluid administration in situations where parenteral fluid administration is not possible or desired. Consider carrying an NG tube or foley catheter on wilderness trips if you do not have room for sterile fluids.

Reference:

Grocott MP, McCorkell S, Cox ML, Resuscitation from hemorrhagic shock using rectally administered fluids in a wilderness environment, Wilderness Environ Med. 2005 Winter;16(4):209-11.

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