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Abstract

INTRODUCTION & AIMS: Elastomeric pumps are widely used to facilitate ambulatory chemotherapy, and studies have shown that they are safe and well received by patients. Despite these advantages, their end of infusion time can fluctuate significantly. The aim of this research was to observe the performance of these pumps in real practice and to evaluate patients’ satisfaction.

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METHODS: This was a two-phase study conducted at three cancer units over 6 months. Phase-1 was an observational study recording the status of pumps at the scheduled disconnection time and noting remaining volume of infusion. Phase-2 was a survey of

patients and their perception/satisfaction. Ethical approval was granted.

**RESULTS:** A total of 92 cases were observed covering 50 cases disconnected at hospital and 42 disconnected at home. The infusion in 40% of hospital disconnection cases was slow with patients arriving at hospital with unfinished pumps. 58% of these had an estimated remaining volume which exceeded 10mL with 35% exceeding 20mL. In 73% of these cases, and regardless of the remaining volume, the patient was disconnected and the pump was discarded.

**CONCLUSIONS:** The performance of pumps varied, which affected nurse workload and patients' waiting-times. A smart system is an option to monitor the performance of pumps and to predict their accuracy.

Reference:

Salman, D., Biliune, J., Kayyali, R., Ashton, J., Brown, P., McCarthy, T., Vikman, E., Barton, S., Swinden, J and Nabhani-Gebara, S. (2017) Evaluation of the performance of elastomeric pumps in practice: are we under delivering on chemotherapy treatments? Current Medical Research and Opinion. August 31st. .

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