

IMPROVING FREE FLAP MONITORING AND OUTCOMES: THE FREE FLAP OBSERVATION (FLO) SCORING CHART

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Introduction: Free flap monitoring without prompt intervention can result in partial or total flap loss. Monitoring devices including implantable dopplers, thermal imaging and oxygen saturation monitoring have been introduced, but none of them has been fully validated or implemented as a gold standard. The FLO scoring chart was designed as an easy monitoring tool with a trigger mechanism to prompt early review. The concept is to create a universal score for flap health that would be an extension to MEWS score.

Methodology: The new free flap scoring chart was introduced in our unit in Sep'2018. It consists of four flap variables; temperature, colour, capillary refill time, doppler signal and three physiology parameters related to hydration status and hence flap health; heart rate, blood pressure and urine output. The aim was to evaluate the effectiveness of the new system as a sensitive monitoring tool and outcome predictor.

Results: From Sep' 2018 to Nov' 2018, 43 free flap cases were included. Flap loss was 4.6% with an average time to intervention for failing flaps of 3.5hrs. In comparison to the preceding six-month period; there were 85 free flaps with 11.2% failure rate and an average time to intervention of 5.9 hrs. The score system was found to be an improvement of the previous chart by the nursing staff and was universally accepted after implementation.

Conclusion: The implementation of the FLO scoring system was found to be an improvement on free flap survival and a reduced time to intervention. It was proven to be a user-friendly monitoring tool with an integrated escalation sequence to prompt earlier intervention, which promotes safer surgery. The authors recommend further validation of the FLO scoring system and development into an e-FLO score.

Biography

Lotte Hardman has completed her MBChB from University of Liverpool in 2013 and her MSc in Humanitarian Studies from Liverpool School of Tropical Medicine 2012. She has published papers in humanitarian, bioscience and surgical topics and is developing her interest in Plastic Surgery in the North West of England.

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