

Abstract

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Predictors of Medical Emergency Team attendance after surgery

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Objectives:

To describe the characteristics and outcomes of patients who require Medical Emergency Team calls (MET) after surgery.

Methods:

Demographic, diagnostic, operative and biochemical data were extracted for all in-patients who underwent a surgical procedure in 2016 at The Alfred Hospital, Melbourne. Patients who had one or more METs within 48 hours of discharge to a general ward were identified. Only the first surgical procedure was considered for each patient. Patients admitted directly to ICU from the operating theatre, or patients who had a MET after an ICU admission post operatively were excluded.

Results:

Of 10,098 patients, 6.9% (697/10098) had one or more METs in the 12-month study period. METs were most commonly called for hypotension of <90mmHg (244/697 – 35.0%) and for decrease in Glasgow Coma Scale (GCS) of more than 2 points (88/697 – 12.6%).

METs most commonly occurred following endoscopy procedures (130/697 – 18.7%) and major orthopaedic surgery (109/697 – 15.6%), following emergency procedures as compared to elective procedures (383/4810 – 8.0% vs 314/5288 – 5.9%, $p < 0.001$) and longer surgical procedures (127 [71-202] vs 106 [59-187] mins, $p < 0.001$)¹.

Patients who had METs were older (62.5 [18.6] vs 54.5 [19.7] years, $p < 0.001$)², had lower haemoglobin levels (125 [21] vs 133 [18] g/L, $p < 0.001$)² and higher level of urea (7.8 [4.8] vs 6.9 [4.3] mmol/L, $p = 0.004$)².

Patients who had METs had longer hospital stays (12 [5-23] vs 3 [1-8] days, $p < 0.001$)¹ and higher mortality (5.3% vs 1.6%, $p < 0.001$).

[1](#) Median [interquartile range]

[2](#) Mean [standard deviation]

Conclusions:

Pre-operative factors may identify a higher risk group and this could be used to target interventions which may reduce the chances of post-operative deterioration. Modification and early identification of these factors may result in shorter hospital stays and prevention of death.