

Abstracts from Highly Commended Posters Society for Acute Medicine Autumn Meeting 2015 Manchester

Over 120 posters were presented at the Society for Acute Medicine autumn meeting which was held in the Manchester Central Conference Centre in September 2015. The judging panel identified a small number from each category which were deemed to be of particularly high standard; the abstracts for these posters are published here.

Category: Audit & Quality Improvement A&QI 16

Title: How Good are we at Managing Sepsis in the Acute Scenario: A Completed Audit Cycle

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In 2010, 5.1% of deaths in England were associated with sepsis.¹ The speed and type of actions that are undertaken in managing sepsis dramatically influence outcomes.²

Aim

To reveal whether we are managing sepsis effectively, and if not, to identify and improve the areas requiring intervention.

Methods

This was a local, prospective audit of all patients in a 7 day period admitted to a district general hospital as medical inpatients with 'sepsis' or 'infection' as a likely diagnosis, who were then confirmed to match the sepsis criteria.³ There were 22 patients who fitted these criteria on the initial audit, 18 on the re-audit. The 10 audit standards used were developed based on the recommendations from the Surviving Sepsis campaign.⁴

Outcome/Results

On initial audit, the average compliance with the standards was 42.7%. Areas of good practice included antibiotic choice that was in keeping with hospital guidelines, and the monitoring of serum lactate when raised. Key areas identified as requiring improvement were the length of time between diagnosis of sepsis and initiation of management, and the low number of patients from whom blood cultures were obtained. The audit results were presented, a teaching programme for nursing staff was implemented and posters were erected; following which re-audit demonstrated average compliance of

51.5% (IRR= 1.21; 95% confidence intervals 1.07-1.36). This is a statistically significant result.

Conclusion

The findings show that education and raising awareness of the importance of prompt identification and appropriate management of sepsis are effective ways of improving compliance with the sepsis guidelines. However we can also see that overall compliance is poor, with only 50% of patients receiving satisfactory care. Further action needs to take place with continuation of current education schemes plus development of resources such as the computer system to prioritise unwell patients.

References

1. Duncan McPherson *et al.* Sepsis-associated mortality in England: an analysis of multiple cause of death data from 2001 to 2010. *BMJ Open*. [Online] August 2, 2013. [Cited: January 12, 2015.]
2. Kumar A *et al.* Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock. *Critical Care Medicine*. June 2006; pp.1589-1596.
3. Bone RC *et al.* Definitions for sepsis and organ failure and guidelines for the use of innovative therapies in sepsis. *Chest*. 6 June 1992; Vol.101: pp.1644-1655.
4. Levy MM *et al.* The Surviving Sepsis Campaign. *Critical Care medicine*. 2 February 2010; Vol.38: pp.367-374.

Category: Audit & Quality Improvement A&QI 19

Title: Improving an acute medical unit's practice of resuscitation discussions and DNACPR documentation

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Aims

Decision making with patients and families about resuscitation is a key responsibility for doctors. The General Medical Council (GMC)¹ and the National

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confidential inquiry into patient outcome and death (NCEPOD),² in their report 'Time to intervene' have provided guidance. Resuscitation decisions should be made as timely as possible and considered for all acute medical admissions. With the day to day demands on an NHS acute medical unit, these discussions and the documentation are often not performed.

The objective of this quality improvement project was to assess and improve the acute medical unit's performance at decision making and documentation of resuscitation decisions.

Methods

This involved a fully completed audit cycle. The method involved case note review of 58 patients. The notes were analysed to see if there was clear accessible documentation about whether a patient was for resuscitation or not for resuscitation. This established a baseline performance. We then initiated a quality improvement program. This improvement campaign involved specific intervention strategies. There was an awareness campaign. There were presentations to the key members of staff. We aimed to target all level of staff and the wider multi disciplinary team. We promoted a culture shift to normalise discussions about resuscitation with patients and families. Following our quality improvement campaign were audited a random cohort of another 58 case notes to see if we had instigated improvement.

Results

The baseline audit results showed that only 16% of patient had clear documentation about a resuscitation decision recorded in the notes. Following or interventions this doubled to 36%. Our intervention led to a significant improvement in documentation about a resuscitation decisions. Scope for further improvements remain.

Conclusion

Our interventions have worked to improve the practice of clearly documenting resuscitation decisions. This has likely led to a reduction in inappropriate resuscitation attempts. It has placed communication with patients and families higher up the agenda. I believe this quality improvement program this has led to a culture improvement in communication with patients and families. We have demonstrated a significant improvement in the documentation of resuscitation decisions, but there is still scope for further improvements.

References

1. General Medical Council. Good Medical Practice 2013. http://www.gmc.uk.org/guidance/ethical_guidance/end_of_life_DNACPR_decision.asp

2. National Confidential enquiry into patient outcome and death. Time to Intervene? A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest . 2012 <http://www.ncepod.org.uk/2012cap.htm>

Category: Audit & Quality Improvement A&QI 22

Title: Improving Multidisciplinary Severe Sepsis Management Using The Sepsis Six

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Several patients in A&E and AMU were not managed optimally, which ultimately led to increased morbidity and mortality. Many staff working in both departments were unaware of the existing trust sepsis pathway and Sepsis Six protocol for management of severe sepsis.

Aim

To assess the appropriate and timely management of these patients. The objectives of the audit included discussing the six steps involved in managing an acutely septic patient, analysing appropriate and timely management of patients with severe sepsis, and actively promoting teamwork to initiate the protocol.

Method

Prospectively patients were audited over 2 months, from the middle of September to the middle of November 2014. All clerking notes of patients with a Medical Consultant diagnosis on post take ward round of 'Sepsis' were analysed, and further screened for presence of severe sepsis according to national guidelines.^{1,2} This was re-audited prospectively from the middle of April to middle of June 2015, after one departmental and one hospital presentation, and updating of the online blood requesting system to show a 'Sepsis' tab (would show the protocol and request bloods automatically).

Results

The initial audit demonstrated that only 1% of appropriate patients had been managed according to the existing guidelines, whereas, the re-audit emphatically showed a significant improvement with 85% eligible subjects adhering to the protocol. These patients were managed timely and appropriately with high flow oxygen, blood cultures, lactate and urine output measurement.

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In the preceding audit a mere 6% of patients were managed appropriately within the “golden hour”, for example, administration of fluids and antibiotics. We demonstrated an improvement to 67% on re-audit. ($p < 0.01$)

Conclusion

There was significant improvement and a complete change in management of severe sepsis resulting in trust wide updated protocols and teamwork to guide timely management, as demonstrated above, leading to a significant decrease in morbidity/mortality.

References

1. Survive Sepsis. (2008). Sepsis/Severe Sepsis Screening Tool. Retrieved July 10th 2015 from http://www.1000livesplus.wales.nhs.uk/sitesplus/documents/1011/PHW_Sepsis_Screening_Leaflet_11.pdf
2. NHS England. (2013). Sepsis Management as a Clinical Priority. Retrieved July 10th 2015 from <http://www.england.nhs.uk/wp-content/uploads/2013/12/sepsis-brief.pdf>

Category: Case Reports CR 17

Title: An unusual presentation of stroke in a young patient

Author(s): Ratna Aumeer, Mishti Oberoi
Macclesfield District General Hospital

Case

We present the case of a carotid dissection, which led to Horner's syndrome and cranial nerve XII palsy. A 50 years old male attended with a week history of headache, which started suddenly. He developed weakness of tongue, with deviation to left side over the next 3 days. On examination he had left miosis and ptosis and left tongue deviation. The rest of neurological examination was normal.

His initial CT brain was normal. MRI angiogram of head and neck was organised and this showed occlusion of the distal part of the left internal carotid artery extending intra-cranially, suggesting a thrombosed dissection.

He was diagnosed with left Horner's syndrome and hypoglossal palsy secondary to left internal carotid artery dissection. His case was discussed with the Vascular team who advised that surgery was not required. He was then started on aspirin.

Discussion

The incidence of carotid dissection is about 3 per 100000/year.

The features include ipsilateral headache, Horner's syndrome, nerve palsies and potentially devastating cerebral ischaemic events.

Horner's syndrome is caused by compression of the ascending sympathetic supply within the carotid sheath resulting in the triad of ptosis, miosis and anhidrosis. Extracranial dissection can cause cranial nerve palsy with cranial nerve XII being the most commonly affected.

If initial CT yields negative results, this should be followed up by more definitive imaging, such as MRA or CTA.

The goal of management is to prevent progressive neurological deficits. Antiplatelet therapy and anticoagulation have been used both individually and in combination, with antiplatelet therapy being recommended in patients with dissection.

Learning point

It is important to recognise that internal carotid artery dissection is one of the common causes of acute ischaemic stroke in young adults. It should always be considered in patients presenting with headache with Horner's syndrome and nerve palsies.

References

1. Chowdhury MM, Sabbagh CN, Jackson D. Antithrombotic treatment for acute extracranial carotid artery dissections: A meta analysis. *Eur J Vasc Endovasc Surg* June 2015
2. Kasravi M, Leung A, Silver I. Dissection of the internal carotid artery causing Horner syndrome and palsy of cranial nerve XII. *CMAJ* June 2010 Vol 182.

Category: Case Reports CR 33

Title: Oh... My tummy hurts!

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Introduction

Abdominal pain is the single most common reason for emergency admission to hospital.¹ Up to 41% of cases cannot be diagnosed in the Emergency Department without further investigations.² We present a case of fatal abdominal pain in a young adult.

Case

A 26-year-old, previously fit and well, Asian male was admitted to the Emergency Department having been found on the street with abdominal pain. Due to language barriers, there was very little history and conflicting information with regards to alcohol consumption. There was a presumed two-day history of intermittent abdominal pain and vomiting. Examination revealed marked tachycardia with a normal blood pressure,

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dehydration and tender upper abdomen with hepatosplenomegaly. Blood tests revealed severe lactic acidosis, grossly deranged liver function and coagulopathy. Renal function and chest x-ray showed no abnormalities.

Subsequent urgent CT abdomen revealed

1. Superior mesenteric vein thrombosis (SMV)
2. Hypoperfusion of the liver (with patent portal vein)
3. Ischaemic small and large bowel, consistent with venous infarction in the SMV territory.

Despite aggressive intensive care management and extensive bowel resection, the patient rapidly deteriorated, developing multi-organ failure (hepatic, renal, metabolic and respiratory) and abdominal compartment syndrome, leading to cardiovascular collapse and subsequent unresponsive cardiac arrest.

Discussion

Mesenteric vein thrombosis accounts for less than 10% of all cases of mesenteric ischaemia; the remainder are arterial.³ It affects a younger population and the onset of symptoms is usually insidious (e.g. more than 30 days), with complete bowel infarction being rare. Mortality in these cases is usually due to multi-organ failure.

Conclusion

Given the non-specific presentation of mesenteric vein thrombosis, diagnosis is often delayed.³ In a patient with no obvious cause for abdominal pain and biochemical derangement, urgent investigations should be performed to reach a diagnosis and commence appropriate management before the onset of multiple organ failure and almost-certain fatality.

References

1. Health & Social Care Information Centre. Available on URL: <http://www.hscic.gov.uk/article/3674/41500-patients-admitted-to-hospital-every-day-in-England---up-nearly-13-per-cent-in-five-years>
2. Tendler DA, Lamont JT, Grubel P. Mesenteric venous thrombosis in adults. Up to date. Oct 2014. Available at URL: <http://www.uptodate.com/contents/evaluation-of-the-adult-with-abdominal-pain-in-the-emergency-department/abstract/4,7-9>
3. Dang CV. Acute Mesenteric Ischaemia. Medscape. Oct 2014. Available at URL: <http://emedicine.medscape.com/article/189146-overview>

Category: Service Organisation and Design SO&D 10

Title: Did we listen to our patients?- pilot for an international study on re admissions

Author(s): Narendra Babu Chinnappa,
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Introduction

Avoidable re-admissions are considered a major adverse incident after hospital discharge. This has an implication to the patient lives and a cost repercussion to hospitals.¹ It is prudent to analyse the rationale behind avoidable re-admissions. Safer@Home is an international collaborative of Acute Physicians investigating avoidable readmissions. CURIOS (Capturing Readmission Data Internationally by SAFER@HOME) is an international audit of re-admissions planned for Q1 2016.

Method

We conducted a prospective pilot for CURIOS at the Ysbyty Gwynedd, Bangor in order to test data collection tools and estimate time requirements for collection of data from 20 medical re-admissions within 28 days after discharge. The pilot started on 17/03/2015 and reached target after 7 days.

Results

We reviewed a total of 20 re-admissions (mean 3 patients per day, range 1-4).

10 (50%) of re-admitted patients had frailty scores of 6 (moderately frail) and 7 (severely frail).² 9(45%) were re-admitted within 7 days of discharge and 2 (10%) within 24 hours. 5 (25%) of re-admitted patients had more than 5 re-admissions in the previous year.

Patients were asked whether they felt better when they went home during the index admission 10 answered with 'no'. Time to readmission was related to duration of index admission ($p<0.03$). This became insignificant once adjusted for patients' wellbeing on discharge.

11(55%) re-admissions were judged to be preventable: Common causes were poor considerations of home support, subjective feeling by patients of being "not completely well at time of discharge" and failure to communicate adequately with primary care.

Conclusion

20 re-admissions per week might result in 800 patients/year, with a potential 440 preventable re-admissions! Attempts to reduce preventable re-admissions should include an assessment of the patient's readiness for discharge and of their home support as well as improved communication of transfer of care.

References

1. Friedman B, Basu J. The rate and cost of hospital readmissions for preventable conditions. *Med Care Res Rev*. 2004 Jun;**61**(2):225-40.
2. Rockwood K, Song X, MacKnight C, Bergman H, Hogan D, McDowell I, Minitiski A. A global clinical measure of fitness and frailty in elderly people. *CMAJ* 2005; **173**(5): 489-95.

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Category: Service Organisation and Design SO&D 11

Title: Do MET Calls Alter Management in the Acutely Unwell Patient

Author(s): Chris Watters, Jenny Rodrigues, Sandra Lamb, Amanda Simpson, Jamie Rylance
NHS

Introduction:

Medical Emergency Teams (MET) are frequently employed to respond to inpatients who are clinically deteriorating as judged by staff observations and track and trigger systems. Their impact is difficult to measure.

Aims:

To identify how MET attendance alters patient care

Methods:

Retrospective observational review of MET referrals over two weeks at University Hospital Aintree, Liverpool. MET Treatment decisions and implementation were ascertained from audit and case notes.

Results:

61 cases were reviewed. Most commonly, MET attended due to physiological abnormalities identified by the Modified Early Warning Score (MEWS) (26 [45%]) or reduced conscious level (20 [34%]). New diagnoses were made in 41 (67%) (with treatment or further investigation implemented in 39). Of those with a new diagnosis seven were reviewed by critical care. Nine patients in total (15.5%) were referred for critical care review with four (6.9%) of those deemed suitable and transferred to ITU/HDU. Of those without a new diagnosis (n=20), 10 cases resulted in a change in management. In 13 (21%) cases, new DNACPR was implemented.

Conclusion:

MET referrals frequently alter the management of acutely unwell and deteriorating patients. The majority of MET calls resulted in initiation of new treatments. Management was altered in those without a new diagnosis, often including not for CPR/MET decisions and/or initiation of medications to optimise symptom control in end of life care.