An assessment of the introduction of a Sepsis Screening Tool on paramedic pre-alerts into North East hospitals

Graham McClelland, BSc(Hons) MComPara; Paul Younger, BA(Hons) FdSc PGCE MComPara; Sonia Byers, BSc(Hons) PgCert
1 Research and Development Department, North East Ambulance Service NHS Foundation Trust

ABSTRACT

We conducted an audit of sepsis patients pre-alerted into hospitals in the North East of England from October 2011 to December 2012. This audit was conducted to assess the effectiveness of the introduction of a sepsis education programme which included a sepsis screening tool. The results of this audit show the number of cases pre-alerted into the hospitals increased, which we interpret as an increased awareness of sepsis, but we see little impact on the treatment delivered by paramedics.

BACKGROUND

Following a review of the use of lactate in the pre-hospital environment (McClelland, Younger and Byers, 2012) sepsis was identified as an area where the addition of lactate monitoring could potentially have an impact. This led to the authors trying to find some figures and data on the patients seen by ambulance crews with sepsis. This search proved fruitless with the national figures being available, such as the 37,000 deaths from severe sepsis annually in the UK (Daniels et al, 2011) but little, or no, local information. It was decided to conduct an audit to try and establish some baseline figures for the numbers of patients with sepsis being seen and treated by ambulance crews within our area. It was thought that these figures could then be used as a reference point against which new interventions, such as lactate, can be compared. Shortly prior to the study being conceived a Sepsis Screening Tool (SST) was introduced into practice within our service so the audit became a method of establishing baseline figures and trying to estimate the impact of the newly introduced SST. The SST is introduced on (REF).

The SST was introduced in to NEAS in the annual statutory and mandatory training programme which runs from April to March each year. The programme is front loaded with efforts being made to get the majority of staff through the programme in the earlier months in anticipation of winter pressures disrupting training. Staff received one hour of teaching about the SST and sepsis. Around 50% of operational staff had undergone the training by the end of September 2012. In addition to the gradual roll out via the statutory and mandatory training days the SST and supporting information was also circulated to all staff via a patient care update on the 6th July 2012.

Prior to the introduction of the SST there was no formal guidance or protocols in place for the identification, or treatment, of sepsis. Paramedics who were trained under the old WCD Paramedic course received no formal sepsis education. Since the change to higher education based training, sepsis may be highlighted in the material taught to new paramedics.

The JRCALC guidelines that are used by ambulance services are due for an update but the most current version (2006) has no specific guidance on sepsis. Sepsis is mentioned as a potential diagnosis for abdominal pains and is also included under meningococcal septicaemia. Septic shock gets a brief mention in the section discussing headaches but was also also circulated to all staff via a patient care update on the 6th July 2012.

METHODS

- Audit of pre-alert calls made to hospitals in the North East of England for suspected sepsis.
- Audit was conducted from 6 months prior to the introduction of the Sepsis Screening Tool (SST) and 9 months afterwards.
- Audit conducted from October 2011 to December 2012.
- The treatment that the patients received was audited for those who received oxygen, IV fluids or the full treatment bundle.
- Only pre-alert data was used as at the time of the audit the research team could not interrogate the larger population of all patients attended by North East Ambulance Service NHS Foundation Trust.

RESULTS

OBJECTIVES

- To report on the numbers of patients being pre-alerted for sepsis in the North East Region
- To assess the effectiveness of the Sepsis Screening Tool (SST) and the introduction of sepsis education into the Statutory and Mandatory training for clinical staff of North East Ambulance Service NHS Foundation Trust (NEAS).
- Too assess the effect of the SST and education on the treatment of patients who have been identified as sepsis during hospital pre-alert.
- To test the hypothesis that sepsis education and the introduction of a sepsis screening tool would increase the reporting of sepsis, and the number of patients receiving the sepsis treatment bundle

CONCLUSIONS

- The hypothesis that sepsis education and use of the screening tool would increase the awareness of sepsis for pre-hospital staff appears to be supported by the results.
- The co-hypothesis, that sepsis education and SST introduction would lead to an increase in the the pre-hospital treatment delivered was not supported by the results.
- That the treatment bundle and value of fluid resuscitation for sepsis needs to be reinforced with staff.