Aims

1. To develop and implement a modified WHO surgical checklist for use in PI; specifically thoracoscopy (TS) and chest drain (ICD) insertion.

Methods Adverse events for TS were identified using a locally developed TS database (previous 3 years data) and ICD events were identified using our unit's BTS National audit data.

Following a MDT discussion we developed and implemented a modified WHO checklist for the specific risks of TS and ICD. The checklists follow the three-part structure recommended by the WHO; 1. Sign in (before arrival to procedural area), 2. Time out (before starting), 3. Sign out (before leaving).

Checklist effectiveness was reviewed 6 months following implementation.

Results

Pre-implementation

For TS there were a small number of adverse events (mistaken identity of an abnormal ECG in patients with similar names, delay in pre-procedure blood results, ECG not performed, intravenous fluids not readily available, kinked ICD, thromboprophylaxis not prescribed); most events led to delayed procedure only.

For ICD insertion, several avoidable patient safety issues were identified: 5.6% no support nurse available; insufficient documentation of observations pre (13.7%) and post (5.6%) ICD insertion.

Post-implementation

No adverse events recorded in TS and an improvement in ICD patient safety issues (procedure not done without support present, observations documented in 42% of cases). Team-working and communication reported to have improved.

However, ICD checklist completion rate was poor (53%), with form retrieval rates in TS low compared to reported completion rates (66.7% v 100%). Forms were generally incomplete.

Conclusion Most adverse events identified were due to system errors despite previously available safeguards. Well-designed procedural checklists can improve patient safety. Paper versions were not fully completed therefore we have incorporated an electronic version of the checklist into the procedural database, which has to be completed before the procedure starts.

REFERENCES

1 *N Engl J Med*. 2009;**360**:491
2 *Clin Med*. 2014;**14**:468–474

P185 EVALUATION OF THE LENT PROGNOSTIC SCORE IN A LARGE TERTIARY PLEURAL SERVICE

H Balata, N Anwar, P Foden, M Al-Aloul, J Holme, M Evison. *University Hospitals of South Manchester, Manchester, UK*

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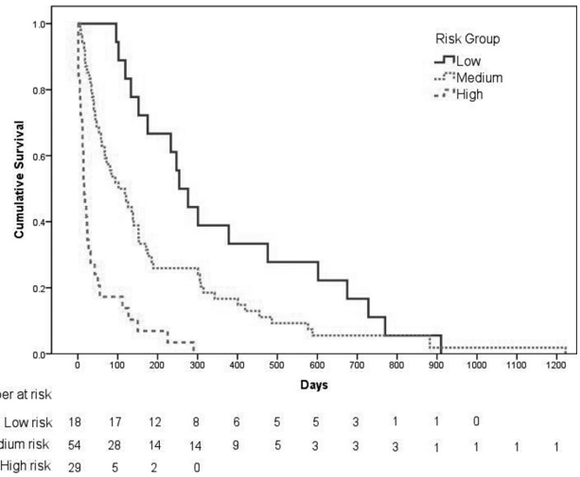
Introduction and objectives Reliable predictors of survival in malignant pleural effusions (MPE) have far reaching applications in clinical practice, not least tailoring individual treatment strategies. The 'LENT' score (pleural fluid **L**actate dehydrogenase; **E**astern Cooperative Oncology Group performance score; **N**eutrophil-to-lymphocyte ratio; **T**umour type) was developed and validated as a clinical prognostic scoring system from three international prospective patient databases.[1] The aim of this study was to evaluate the LENT score in a further UK population of patients with MPE, geographically separate from those in the original study.

Methods Our hospital is a large tertiary centre for a physician-led pleural service (including medical thoracoscopy), a regional mesothelioma centre and a regional thoracic surgical centre. A retrospective study of all patients with positive (i.e. diagnostic for malignancy) pleural cytology or histology from 2010 to 2014 was undertaken. This timeframe allowed a minimum of 12 months follow-up for all patients. Survival data was obtained from national death registries. All patients in whom all LENT criteria were available were included in the analysis. A Kaplan-Meier curve and a Cox regression model were used to assess the LENT risk category. Harrell's C statistic was used to assess the accuracy of the regression model and mortality rates at time points of interest were calculated.

Results The LENT score was calculated for 101 patients diagnosed with MPE. The median survival (days, IQR) for the low (n = 18), medium (n = 54) and high risk (n = 29) groups were: 254 (152–602), 102 (40–301) and 16 (7–42). In the high risk group, only 31% of patients survived 1 month and 7% survived 6 months. There is a statistically significant difference in the survival times in the different risk groups according to the log-rank test ($p < 0.001$). Harrell's C statistic in this cohort is 0.69 (see Figure 1).



Abstract P185 Figure 1

Conclusions The LENT scoring system has again been shown to be a good tool for predicting survival in patients with MPE when applied to a geographically distinct cohort of patients to the original study. The LENT score continues to be a clinically valuable tool in the assessment of patients with MPE.

REFERENCE

1 Clive AO, *et al*. *Thorax* 2014;**69**(12):1098–104

P186 CHEST DRAIN CARE BUNDLE IMPROVES CHEST DRAIN INSERTION IN DISTRICT GENERAL HOSPITAL

H Steer, J Hutton, S Graham, R Jones. *Gloucestershire NHS Trust, Gloucester, UK*

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