P84 IS THE CURB-65 SCORE A RELIABLE TOOL FOR GUIDING INITIAL ANTIBIOTIC THERAPY IN ACUTELY UNWELL PATIENTS WITH COMMUNITY ACQUIRED PNEUMONIA?

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Introduction Prompt appropriate antibiotics for community acquired pneumonia (CAP) reduces mortality, length of stay and adverse events. Antibiotic choice is directed by the CURB-65 score and clinical judgement.¹ Admission is recommended for most CURB-65 ≥ 2 .¹ Recent national data showed an unexplained non-compliance of 40% (>2000 patients) with CAP antibiotic guidelines using CURB-65 scores alone. Antimicrobial misuse and resistance are a global concern. We investigated compliance with our Trust CAP guidelines and used an early warning score (EWS)² to quantify clinical judgement.

Methods Data were collected retrospectively for adults attending the emergency department with CAP⁴ over 4 months. The CURB-65 and the Trust's EWS (Physiological Observations Track and Trigger system – POTTs)² were calculated at presentation. A POTTs score of 2 triggers escalation of care. Prescriptions were compliant when the initial antibiotic concurred with the Trust guideline. Patients receiving broader spectrum agents than recommended were 'over-treated'. Admission was noted.

Results (Table 1) Of 77 patients with CAP, 11 (14%) received 'compliant' antibiotics (Table 1). 38 (49%) patients were over-treated, 25 (66%) of whom had POTTs ≥ 2 , though 15 (60%) of these patients had low severity CURB-65 of 0–1. Of 49 patients with POTTs ≥ 2 , 27 (55%) had a CURB-65 of 0–1, 26% a CURB-65 of 2. 44% and 68% of those with a CURB-65 of 0 or 1 were admitted, with higher average POTTs than those discharged.

Conclusion The majority of patients incorrectly prescribed broad spectrum antibiotics had a CURB-65 score that failed to categorise them as sick enough to warrant them despite an EWS ≥ 2 . Hospital admission demonstrated similar findings. Over half of those with an elevated EWS had a low severity CURB-65. We did not collect outcome data but the 'over-treatment' and admission appear appropriate. Prompt, effective and empiric antimicrobials for septic patients give better clinical outcomes. Seemingly non-compliant antimicrobial prescriptions may have punitive implications for Trusts. We suggest that CURB-65 under-recognises sepsis syndrome and thus the EWS should be included and further validated in CAP guidelines and audits.

REFERENCE

- 1 BTS CAP guidelines
- 2 RJ Oakley, V Slade. Physiological observation track and trigger system. *Nursing Standard*. 2006;20:48–54

P85 HIV-RELATED ACUTE RESPIRATORY ADMISSIONS – GOOD OUTCOMES AND AN OPPORTUNITY FOR TESTING

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Introduction The burden, changing pattern and outcome of HIV-associated lung disease following the introduction of anti-retroviral therapy (ART) remains to be defined. We sought to

investigate these factors in an unselected cohort of individuals admitted acutely to our London teaching hospital.

Methods Consecutive admissions were prospectively collected between June 2013 and May 2014. In those where the cause for admission was an acute respiratory illness, patient notes and electronic records were interrogated. Patients were allowed >1 diagnoses and in-hospital outcomes only were reported.

Results Fifty-three of 149 (35%) acute HIV admissions were with respiratory causes, (3 patients had 2 admissions >30 days apart). Median age was 45 years and 28% (15) were female. Median CD4 count was 109 (range 3–867) cells/uL; 14 (26%) had fully suppressed HIV loads (VL <20 copies/ml).

4 of 53 (8%) were admitted with non-infectious diagnoses: 2 with lung cancer, 1 non-infective COPD exacerbation and 1 non-specific interstitial pneumonia. The remainder had infections: 12 (23%) had culture-confirmed bacterial pneumonia, 11 (21%) were treated for PCR, 8 (15%) had culture-confirmed Mycobacterium tuberculosis (1 MDR), 4 had confirmed viral pneumonia (8%). 20 (38%) patients completed treatment for pneumonia with no specific laboratory confirmation. The most common bacterial isolates were streptococcus pneumoniae (4 cases), haemophilus influenzae (3), pseudomonas aureginosa (2) and klebsiella pneumoniae (2). In 11 of 53 (22%) a new diagnosis of HIV was made at the time of admission, 10 of whom presented as acute community acquired pneumonia (CAP). In 9 of 11 (82%) CD4 count was <200 cells/uL and 6 of 11 (55%) required ICU care. In total 20 of 53 (38%) were admitted to ICU, and 8 (15%) required mechanical ventilation. Median length of stay in hospital was 9 (2–397) days. 1 of 53 (2%) patients died.

Conclusions Acute respiratory illness remains a significant cause of HIV admissions, with opportunistic and non-opportunistic pathogens commonly identified. Outcomes were reassuringly good despite the frequent need for ICU support. We believe our data underlines the important opportunity that a presentation with acute respiratory illness provides to test for and diagnose HIV infection.

P86 DO WE NEED A SPECIFIC GUIDELINE FOR THE MANAGEMENT OF ASPIRATION PNEUMONIA (AP)?

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Introduction and objectives Aspiration-related pneumonia accounts for 10–15% of cases hospitalised with community acquired pneumonia. Guideline-directed pathways for the diagnosis and management of AP are lacking in detail (BTS/ATS/IDSA). The local practice of assessing patients admitted with primary diagnosis of AP and outcome was evaluated in a large tertiary hospital in the UK.

Methods A retrospective cohort study that reviewed the case notes of 34 consecutive patients admitted to hospital with a high likelihood for a diagnosis of community acquired aspiration pneumonia (CAAP). Aspiration risk assessment on admission, appropriate antimicrobial therapy, dietetic and Speech and Language Therapy (SALT) team input, airway assessment, length of hospital stay and mortality were included in the data analysis.

Results A crude risk assessment for aspiration was performed in all patients on admission. An aspiration event was witnessed in 35% of cases. Pre-existing neurological pathology was the predominant risk factor (70%). Appropriate antimicrobial therapy was commenced within 4 h of admission in 14 (58%) cases.

Poster sessions

Airway assessment by a SALT team was performed in 4 patients within 48 h of admission. None of the patients underwent video fluoroscopy. An initial dietetic review within 72 h of admission was observed in 6 patients (18%). Median hospital stay was 8 days and in hospital mortality was 41%.

Conclusion The study demonstrates a significant inconsistency in the initial management of patients hospitalised with AP. The lack of early intervention by SALT and dietetic services and routine video fluoroscopy use in the majority of patients is of concern. A specific guideline with an evidence based diagnostic pathway and management is needed for patients at high risk for AP.

P87 KLEBSIELLA PNEUMONIAE SURVIVAL ON PLASTIC VALVED HOLDING CHAMBER BODIES

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Introduction and objectives *Klebsiella pneumoniae* (KPN) is an opportunistic pathogen for patients with chronic pulmonary disease. In-use single time-point sampling of valved holding chamber spacer (VHC) bodies has shown evidence (Cohen and Cohen, JAMA 2003, 290:195–196) of bacterial contamination particularly with *Pseudomonas* species and *Klebsiella*. We are not aware of multi time-point bacterial survival research and, accordingly, have assessed *in vitro* two plastic VHC body materials which are in common use in the UK.

Methods Test pieces, in n = 5 sub-group samples (Samples), of polystyrene (sterile Control) and of VHC bodies of AeroChamber Plus, Trudell Medical International (ACP) and A2A Spacer, Clement Clarke International Ltd. (A2A) were equilibrated for 24 h at 20°C/65% relative humidity (RH). Samples were inoculated with 100 µL distilled-water aliquots of KPN 3.6×10^6 cells.mL⁻¹ and incubated at 20°C in 65% RH chambers. KPN surface survival was measured at 0, 24, 48 and 72 h time-points using a method based on ISO Standard 22196:2007 (Askew, Efficacy Assessment of Treated Articles: A Guidance, February 2014 <http://dx.doi.org/10.6027/NA2014-904>) and total viable count enumerated. 72 h data (Log₁₀ Colony Forming Units (CFU).cm⁻²) were analysed using one-way analysis of variance.

Results Geometric mean CFU.cm⁻² data are given in the table. Control and ACP KPN populations declined to the 48 h time-point, thereafter increasing (Control) and remaining constant (ACP). A2A KPN population showed a constant decline, with no re-growth. At 72 h, Log₁₀ CFU KPN data for A2A were significantly smaller (p < 0.05) compared to ACP (-0.47 difference, 95% CI -0.81 to -0.13) and to Control (0.74 difference, 95% CI 0.41 to 1.08).

Conclusions We interpret the 72 h increase in Control KPN as the outcome of the initial decline creating dead cell matter that acted as a nutrient source. The stability (ACP) and significant decline (A2A) in KPN is therefore an interesting finding. We subscribe the latter to the presence of an antimicrobial additive in

Abstract P87 Table 1

Sample (n = 5)	Geometric mean KPN CFU.cm ⁻²			
	Contact time (hours)			
	0	24	48	72
Control	1.8×10^5	4.7×10^5	2.8×10^4	4.8×10^4
ACP	1.8×10^5	5.4×10^4	2.7×10^4	2.5×10^4
A2A	1.8×10^5	5.1×10^4	1.7×10^4	8.6×10^3

the body polymer material. The clinical implications of these findings are relevant to VHC hygiene and patient health, and require further investigation.

Smoothing the process: clinical management of COPD and bronchiectasis

P88 AN EVALUATION OF THE PATIENTS PATHWAY TO ACCIDENT AND EMERGENCY (A AND E) OR INPATIENT ADMISSION FOLLOWING AN EXACERBATION OF ASTHMA OR CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN A LARGE TEACHING HOSPITAL

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Introduction Asthma and COPD account for a significant proportion of inpatient admissions in the UK. A national review of asthma deaths found that a significant proportion of patients die without seeking medical assistance or before emergency medical care could be provided.¹

Objectives Establish the pathway that patients undertake to access care in the lead up to an A and E attendance and/or inpatient admission.

Method Patients attending A and E and/or following an inpatient admission due to an exacerbation of asthma or COPD were reviewed by a respiratory pharmacist during weekday working hours. Patients were identified during post take ward rounds and using hospital electronic systems. All analyses were conducted using SPSS 22. Ethics approval was not required.

Results Over the six-month period, 539 (138 asthma and 403 COPD) presentations for exacerbations of asthma and COPD were reviewed. As Table 1 shows, only 48% (n = 66) and 46% (n = 185) of asthma and COPD patients respectively, received medical attention and/or had an active intervention (e.g. administration of rescue pack of oral corticosteroids and/or antibiotics) prior to presenting to hospital. The remaining 52% (n = 72) and 54% (n = 218) respectively either did not seek medical attention or were unable to be reviewed (e.g. unable to obtain an appointment with their general practitioner, GP) prior to their attendance. The results also show that the majority of patients were registered with a GP.

Conclusion Despite the majority of patients having access to a GP, a significant proportion of asthma and COPD patients either did not seek medical attention prior to presenting to hospital, or were unable to be reviewed by their GP. These findings correlate with those found in the national review of asthma deaths.¹ At a time of increasing demands on healthcare resources, these results pose the question of how we can better triage patients to

Abstract P88 Table 1 Pathways to A and E and/or Inpatient Admission

	Asthma (n = 138)	COPD (n = 403)
Registered with GP	135 (98%)	392 (97%)
Patients who sought medical attention and/or active intervention	66 (48%)	185 (46%)
Patients who sought medical attention but did not receive it	20 (14%)	42 (10%)
Patients who did not seek medical attention and/or active intervention	52 (38%)	176 (44%)

Corrections

S Cormack. P86 Do we need a specific guideline for the management of Aspiration Pneumonia (AP)? *Thorax* 2014;69(Suppl 2):A113. doi:10.1136/thoraxjnl-2014-206260.227

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