

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 4011

**Publication Number:** P2507

**Abstract Group:** 10.1. Respiratory Infections

**Keyword 1:** Bacteria **Keyword 2:** No keyword **Keyword 3:** No keyword

**Title:** Admission hyperglycaemia is associated with increased risk of diabetes mellitus following hospitalisation with community acquired pneumonia

Dr. Aran 25948 Singanayagam aransinga@gmail.com MD <sup>1</sup>, Dr. Gillian 25949 Fleming g.b.fleming@sms.ed.ac.uk MD <sup>2</sup>, Dr. Ahsan 25950 Akram ahsan.akram@hotmail.co.uk MD <sup>2</sup>, Dr. Adam 25951 Hill adam.hill2@nhs.net MD <sup>2</sup> and Dr. James 25952 Chalmers jamesdchalmers@googlemail.com MD <sup>2</sup>. <sup>1</sup> Respiratory Medicine, St. Mary's Hospital, London, United Kingdom and <sup>2</sup> Department of Respiratory Medicine, Royal Infirmary of Edinburgh, United Kingdom .

**Body:** Background Hyperglycaemia has previously been shown to correlate with adverse outcome in community acquired pneumonia (CAP). The aim of this study was to assess whether hyperglycaemia is associated with increased risk of diabetes mellitus (DM) following admission with CAP. Methods We conducted a prospective observational study of patients who had survived hospitalisation with CAP. All patients had random serum glucose measured on admission and were categorised into normoglycaemia (4.0-6.0 mmol/L), mild hyperglycaemia (6.1-7.0 mmol/L), moderate hyperglycaemia (7.1-14.0 mmol/L) and severe hyperglycaemia (>14.0 mmol/L). Patients with pre-existing DM or those who were hypoglycaemic on admission were excluded. The outcome of interest was diagnosis of diabetes mellitus within one year of hospital discharge. Results 1202 patients were included with 85 (7.1%) diagnosed with DM within one year of follow-up. Rates of diabetes diagnoses according to admission glucose level were: normoglycaemic group 3.9%, mild hyperglycaemic group 6.4%, moderate hyperglycaemic group 9.8% and severe hyperglycaemic group 64.7%. On multivariable analysis, adjusting for age, gender, smoking status, cardiovascular disease and pneumonia severity, there was a graded increase in association of hyperglycaemia and subsequent diabetes diagnosis: mild hyperglycaemia (OR 1.55 (0.78-3.09) p=0.2), moderate hyperglycaemia (OR 1.69 (1.25-2.29) p=0.0007), severe hyperglycaemia (OR 3.0 (2.02-4.46) p<0.0001). Conclusion Moderate to severe hyperglycaemia on admission with CAP is associated with increased risk of subsequent DM diagnosis within one year of hospital discharge.