suggesting an altered inflammatory phenotype, at least in these models, to these stimuli.


**REFERENCES**

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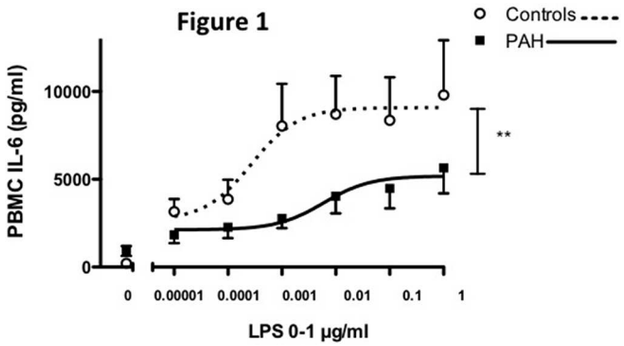


**Abstract P159 Figure 1.**

## P160 RETROSPECTIVE STUDY ANALYSING WHETHER OPTIMIZATION OF PULMONARY VASCULAR ENHANCEMENT INFLUENCES DIAGNOSTIC OUTCOME IN THE INTERPRETATION OF CT PULMONARY ANGIOGRAMS (CTPA)


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**Introduction and Objectives** Pulmonary embolism (PE) is a common cardiovascular emergency and is the most common preventable cause of hospital deaths. Various factors can impact on the diagnostic accuracy of CTPA, which is now considered the 1st line investigation for PE diagnosis. Mis-timing of contrast medium administration or cardiac impairment can result in an indeterminate scan through hidden or mimicked emboli. This study focuses on the accuracy of CTPAs in excluding a diagnosis of PE.

**Method** This is a single centre study looking at all inpatient and outpatient CTPAs carried out over a 12-month period with matched CTPA and lower limb ultrasound Doppler events selected. Of these matched studies, all positive CTPAs for PE were excluded. Of the remainder, only those studies done within 6 months of the original CTPA were included in the study. CT pulmonary arterial (PA) opacification with intravenous contrast medium was objectively measured in Hounsfield units (HU) using an oval region of interest in the main pulmonary trunk. PA opacification was categorised as very poor (<100 HU), suboptimal (< 200 HU) and optimal (= 200HU) as measured at the PA trunk based on the estimation that a minimal opacification of 100 HU is required for identification of acute emboli and 200 HU is required for identification of chronic emboli.

**Results** From the 32 CTPAs included in the study, 28 had a negative initial CTPA with subsequent negative CT or US follow-up. 4 of these cases had an initial negative CTPA with a subsequent positive CTPA or lower limb US Doppler study. Of these latter cases only one initial CTPA was deemed poorly suboptimal (average 174HU) with optimal pulmonary arterial opacification in all other three initial CTPAs.

**Conclusion** This study demonstrates that despite a large number of initially negative CTPAs undergoing subsequent follow-up imaging due to presumed persistent or recurring patient symptoms, the majority (87.5%) of these negative scans were still negative and only 12.5% were positive for PE. No major pitfall has been identified in local CTPA acquisition technique that may have led to subsequent misses of potentially life-threatening PEs.

# Clinical trials in asthma

## P161 A RANDOMISED CONTROLLED TRIAL OF SINGLE COMBINATION BUDESONIDE/FORMOTEROL INHALER AS MAINTENANCE AND RELIEVER THERAPY IN ASTHMA PATIENTS AT RISK OF SEVERE EXACERBATIONS


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**Introduction** The Single budesonide/formoterol inhaler Maintenance And Reliever Therapy (SMART) regimen reduces severe asthma exacerbations, but it is uncertain whether it increases the risk of adverse effects due to high beta-agonist and corticosteroid doses with both short-term and cumulative exposure.

**Objectives** Our hypothesis was that treatment with the SMART regimen would reduce the risk of beta-agonist overuse but that when such episodes occurred, patients were less likely to seek medical review and, that any reduction in severe exacerbations would be at the cost of a higher systemic corticosteroid burden.

**Methods** This was a 24-week, open-label, parallel group trial in 303 asthma patients with a recent exacerbation, conducted at four primary healthcare practices and one secondary care hospital. Participants were randomised to 200/6 g budesonide/formoterol metered dose inhaler according to the SMART regimen (two actuations twice daily maintenance with one extra actuation as-needed) or a fixed-dose regimen (two actuations twice daily maintenance) with one to two actuations of 100 g salbutamol as-needed ('Standard'), with electronic monitoring of actual inhaler use. The primary outcome was the proportion of participants with at least one high beta-agonist use episode (>12 budesonide/formoterol actuations/day in SMART or >16 salbutamol actuations/day in Standard).

**Results** There was no significant difference between groups in the proportion of participants with at least one high use episode: SMART 84/151 (56%) vs Standard 68/152 (45%) participants; relative risk (95% CI) 1.24 (0.99–1.56), p = 0.058. There were fewer days of high use [mean (SD) 5.1 days (14.3) vs 8.9 days (20.9), relative rate (RR) (95% CI) 0.58 (0.39–0.88), p = 0.01] and days of high use without medical review [8.5 days (17.8) vs 18.3 days (24.8) per high use patient, RR 0.49 (0.31–0.75), p = 0.001] in the SMART group. The SMART regimen resulted in higher average daily inhaled corticosteroid exposure, but reduced oral corticosteroid exposure, with no difference in composite systemic corticosteroid exposure [ratio of means (95% CI) 1.03 (0.86–1.22), p = 0.76]. SMART participants had fewer severe asthma exacerbations [35 vs 66, RR 0.54 (0.36–0.82), p = 0.004].

**Conclusions** The SMART regimen has a favourable risk/benefit profile in patients at risk of severe asthma exacerbations.

## P162 EFFECT OF ADDING PROPRANOLOL OR INCREASED INHALED CORTICOSTEROID DOSE IN PERSISTENT ASTHMA