

**Results** 70 patients investigated for suspected PE in an acute teaching hospital during September 2010 were reviewed. Mean age 58 years (median 61), 60% female. The majority of patients presented with breathlessness (64%) and pleuritic chest pain (54%). There was no documentation of clinical probability in 69% of notes, however 73% of imaging requests had clinical probability scores recorded. Eight patients (26%) did not have any risk factors for venous thrombo-embolism. Four patients had CT pulmonary angiogram following an inconclusive perfusion scan. The majority of the patients (70%) were weighed prior to prescribing LMWH. Five (7%) patients had their weight estimated and 14 (20%) had no documentation of weight. Creatinine clearance was <30 ml/min in three patients, one patient had their LMWH adjusted accordingly. More than half of patients (53%) received incorrect dose of LMWH. No LMWH related complication was recorded in any patient.

**Conclusion** This small cross sectional study has limitations. Larger studies are needed to evaluate the frequency of harm associated with incorrect prescription of LMWH.

### P11 ASSESSMENT OF MALIGNANCY IN PATIENTS WITH IDIOPATHIC PULMONARY EMBOLUS: AN AUDIT

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**Background** There are 65 000 cases of pulmonary embolus (PE) in hospital per year in England and Wales. There is a significant association between idiopathic venous thrombosis and cancer and an increase in risk of diagnosis of cancer within a year of idiopathic venous thrombosis. The British Thoracic Society (BTS) guidelines suggests that all patients who do not have a major risk factor for PE should receive "a combination of careful clinical assessment, routine blood tests and chest radiography" and only when these indicate possibility of malignancy, should further imaging or invasive investigations for malignancy be considered. Our aim was to evaluate these guidelines in a large teaching hospital in England.

**Method** A retrospective patient-chart review of all patients admitted with pulmonary embolus over 12 months was performed. A patient was excluded if they had a clear major risk factor for developing PE for example, recent pelvic surgery, known malignancy etc. If a patient had no clear risk factor, the documentation during the admission was reviewed to see whether clinicians were complying with BTS guidelines and assessing for malignancy appropriately. A pro-forma was designed to check this, with 1 point being given for every aspect of history/investigation performed in regards to assessing for cancer for example, 1 point awarded if the patient was asked about recent change in bowel habit; 1 point if the patient's serum calcium was checked. An overall score was given for each clinical assessment for malignancy for each patient (out of 14 for men; out of 15 for women).

**Results** 202 patients with confirmed PE were admitted over 12 months. 39 patients were included in the study. In summary, compliance with BTS guidelines calling for thorough clinical assessment was poor in a number of parameters—patients were not asked if they were suffering from systemic symptoms of malignancy, or assessed for symptoms and signs of common malignancies associated with PE. Conversely, a number of patients were inappropriately referred for further investigation—particularly imaging—for possible malignancy without a documented history or examination pertaining to a specific malignancy.

**Conclusion** Compliance with the guidelines from the BTS is poor. Adequate histories and examinations for malignancy are not being performed. This suggests that either the guidelines or the clinical practice needs re-evaluation.

## Interferon-gamma assays in TB diagnosis

### P12 ROLE OF INTERFERON GAMMA RELEASE ASSAY (QUANTIFERON—TB GOLD IN TUBE) IN BLOOD IN THE DIAGNOSTIC WORK UP OF ACTIVE TUBERCULOSIS IN A HIGH TB PREVALENCE REGION

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**Objective** To study the role of Interferon gamma release assay (IGRA) (QuantiFERON—TB Gold In Tube) in blood in the diagnostic work up of active tuberculosis (TB) in a high TB prevalence region.

**Design** Prospective, comparative group study.

**Setting** Subjects presenting to the services of the Pulmonary Medicine Department of a large tertiary care teaching hospital in northern India.

**Methods** We prospectively enrolled, 30 cases of smear or histopathology proven newly diagnosed tuberculosis (18 pulmonary (PTB) and 12 extra-pulmonary (EPTB)) patients controls along with 30 healthy controls. All cases and controls underwent Tubercular Skin Test (TST) using 0.1 mL (1 tuberculin units) of purified protein derivative RT23 and IGRA using QuantiFERON-TB-Gold In Tube assay (QFT) in blood. For TST an induration  $\geq 10$  mm was taken as positive. QFT testing was performed and interpreted as per manufacturer's (Cellestis) instructions.

**Results** We studied 30 patients of active tuberculosis (18 PTB and 12 EPTB) and 30 healthy controls (14 men and 13 women, mean age  $35.03 \pm 13.23$  years). TST positivity had a sensitivity of 83.33% and 66.67% and specificity of 60% for both categories for the diagnosis of active PTB and EPTB respectively. In contrast QFT positivity had a sensitivity of 61.11% and 58.33% and specificity of 50% for the diagnosis of active PTB and EPTB respectively.

**Conclusions** In this study the QFT-IGRA had a limited overall usefulness in the diagnosis of active pulmonary and extrapulmonary TB. QFT, thus can neither be taken as rule in nor rule out test in a

Abstract P12 Table 1 Head to head comparison of TST & QFT positivity in different categories of tuberculosis patients (vs control)

Parameter	Value obtained for TST (95% CI)	Value obtained for QFT (95% CI)
<b>Pulmonary tuberculosis</b>		
Sensitivity for positive test	83.33% (0.5858 to 0.9642)	61.11% (0.3575 to 0.8270)
Specificity for positive test	60% (0.4060 to 0.7734)	50% (0.3130 to 0.6870)
Efficiency (correct classification rate)	68.75% (0.5375 to 0.8134)	54.17% (0.3917 to 0.6863)
Predictive value of positive test	55.56% (0.3533 to 0.7452)	42.31% (0.2335 to 0.6308)
OR	7.5000 (1.7791 to 31.6170)	1.5714 (0.4793 to 5.1526)
Predictive value of negative test	85.71% (0.6366 to 0.9695)	68.18% (0.4513 to 0.8614)
<b>Extra pulmonary tuberculosis</b>		
Sensitivity for positive test	66.67% (0.3489 to 0.9008)	58.33% (0.2767 to 0.8483)
Specificity for positive test	60% (0.4060 to 0.7734)	50% (0.3130 to 0.6870)
Predictive value of a positive test	40% (0.1912 to 0.6395)	31.82% (0.1386 to 0.5487)
Efficiency (correct classification rate)	61.90% (0.4564 to 0.7643)	52.38% (0.3642 to 0.6800)
OR	3.0000 (0.7361 to 12.2268)	1.4000 (0.3620 to 5.4139)
Predictive value of negative test	81.82% (0.5972 to 0.9481)	75% (0.5090 to 0.9134)
<b>Any tuberculosis</b>		
Sensitivity for positive test	76.67% (0.5772 to 0.9007)	60% (0.4060 to 0.7734)