European Respiratory Society
Annual Congress 2012

Title: Medical thoracoscopy: Learning curve of a new service

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Body: Introduction: Many hospitals have, or plan to establish, a Medical Thoracoscopy (MT) service. Whilst high diagnostic yields and low adverse event rates are widely reported[1], little is known about the learning curve attributed to the procedure. Aims: To examine the diagnostic rate per annum ('hit rate') and learning curve of a Medical Thoracoscopy service in a large District General Hospital. Methods: We retrospectively analysed data from our first 100 consecutive MT's since November 2008. Procedures were carried out by three Consultants with experience of Medical Thoracoscopy, one Consultant learning the technique and trainees under close supervision. 'Hit-rate' per year was calculated and trend analysed to determine the learning curve. Results: 'Hit-rate' was 65% in year 1, 79% in year 2 and 89% in year 3, demonstrating a steep learning curve for this skill. Histologically confirmed diagnosis included mesothelioma (n=34), metastatic lung cancer (n=20; predominantly non-small cell lung cancer), other metastatic malignancy (n=16;predominantly Ca Breast), pleural Tuberculosis (n=4), chronic inflammation (n=13) and fibrous pleural plague (n=1).Five MT's were performed for palliative purposes, one had to be abandoned and six failed to achieve a diagnostic yield. No major procedure related adverse events were noted during the study period. Conclusions: This data provides insight into the diagnostic learning curve of a new MT service. Improved patient selection and enhanced operator skills should produce a diagnosis rate of over 90% in year 4.The study also re-confirms the safety and high diagnostic yield of this procedure, even outside the settings of mesothelioma. Reference 1) Casal RF et al; Curr Opin Pulm Med 2009.