Pulmonary hypertension associated with COPD / Emphysema: results from the ASPIRE Registry

ONLINE SUPPLEMENT

Computer tomography scan acquisition parameters and measurements

From 2006, a 64 slice MDCT scanner (Light-Speed General Electric Medical Systems, Milwaukee, WI) was used. CTPA was performed during a single breathhold and acquisition parameters: 100mA with automated dose reduction, 120kV, pitch 1, rotation time 0.5s and 0.625mm collimation. The field of view was 400x400mm with an acquisition matrix of 512 x 512. 100ml of intravenous contrast agent (Ultravist 300; Bayer Schering, Berlin, Germany) was administered at a rate of 5ml/sec. The CTPA images were reconstructed using a soft filter to provide contiguous 0.625mm axial slices from the apex of the lung to the diaphragm for review. 1.25mm HRCT slices were also reconstructed every 10mm from the contrast enhanced acquisition using a high spatial resolution filter. Prior to 2006 CTPA was performed using single slice scanners (CTi Hispeed and Hi speed Fxi, GE, Connecticut, USA). A 100ml bolus of intravenous contrast (Ultravist 300; Bayer Schering, Berlin, Germany). Acquistion parameters of 250mA, 120kVp, 1.4 pitch, 3mm slice thickness and 0.5s rotation time were used.

Widest short axis diameter of the main pulmonary artery was measured and the corresponding transverse diameter of the ascending aorta was obtained. The maximum short axis distance of the right and left ventricle were also measured in an axial plane. Left atrial size was assessed using the maximal left atrial antero-posterior dimension measured from axial CT slices.