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Title: An audit of adverse events during pulmonary function testing (PFT) and cardiopulmonary exercise testing (CPEX) in pre-operative abdominal aortic aneurysm (AAA) patients

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Body: **Aims:** As the presence of an AAA is a relative contraindication to testing, we have investigated the incidence of adverse events during and after PFTs in patients undergoing assessment for AAA repair. **Methods:** 150 patients were tested during the period 26/09/2011 to 31/10/2012. Patients had spirometry, carbon monoxide transfer testing, CPEX testing and had their AAAs measured anteroposteriorly via ultrasound or by CT of aorta pre-operatively. Patients Data on co-morbidity were extracted from the patient's clinical notes. Patients whose AAA diameter was not measured at time of testing were excluded from the analysis. No ethics required as we have carried out a retrospective audit of data obtained for routine clinical use. **Results:** 150 patients (30 females), age range 31-89 years old (mean 73 ± 7.8 (SD)) were all Caucasian, with the large majority being smokers (n=50) or ex-smokers (n=89). Patients were classified as having small (3.0 – 4.0 cm, n=4), medium (4.0 – 5.4 cm, n=22) or large (>5.5cm, n=124) diameter aneurysms. Seventeen patients died during the study, with causes noted. None of the deaths were related to the tests. Most patients (n=125) had at least one or more co-morbidities. No adverse events were recorded during testing other than cough, chest tightness, light-headedness and breathlessness. **Conclusions:** No significant adverse events were observed during PFTs and CPEX testing in patients with AAAs, even those presenting with other co-morbidities. The status of AAA as a relative contraindication to PFT may need to be reassessed, at least in a hospital setting.