

## DETERMINATION OF THE RISK OF PERIOPERATIVE $\beta$ -BLOCKADE IN PATIENTS WITH PERIPHERAL VASCULAR DISEASE

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**Introduction:** Traditionally-assumed contraindications to  $\beta$ -blockade (namely chronic obstructive airways disease (COPD) and peripheral vascular insufficiency) may deter the perioperative use of these agents for those undergoing arterial surgery. Here we establish the clinical relevance of these theoretical concerns.

**Methods:** After ethics committee approval and informed patient consent, pulmonary function (full spirometry) and ankle-brachial indices (ABI) of twenty patients (11 males, mean age 68.7 years (range 43-82)) undergoing non-emergent major vascular surgery were studied before and after institution of effective  $\beta$ -blockade (metoprolol 50-100mg b.d, p.o. titrated until resting heart rate of <65 b.p.m. was established).

**Results:** Fifteen patients had significant smoking histories (mean pack years/patient=50), while 12 had significant COPD (of whom only three were being adequately treated). All patients tolerated  $\beta$ -blockade satisfactorily without developing either subjective deterioration in symptoms or significant change in PFT assessment (*see table*). However, airway reversibility in response to inhaled salbutamol was significantly impaired in two patients. There was no significant change in ABI results following treatment (Mean change ABI -0.04 +/- 0.17).

<i>Mean pre <math>\beta</math>-blockade FEV1</i>	<i>Mean change in FEV1</i>	<i>Mean change in reversibility</i>
2.04 +/- 0.85	-0.11 +/- 0.32	0.5 +/- 7.69

**Conclusions** Traditional contraindications should not dissuade perioperative use of  $\beta$ -blockade in patients with peripheral vascular disease. The accuracy of ABI and PFTs in preoperative assessment and risk stratification appears unaffected by this therapy.