Low exercise capacity in small, unrepaired Ventricular Septal Defects

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Background

- Small ventricular septal defects (VSD) are most-ly left unrepaired
- Some patient complain of reduced physical en-durance
- Long-term results remain undetermined

Aim

- Determine long-term exercise capacity of adults with small, unrepaired VSDs

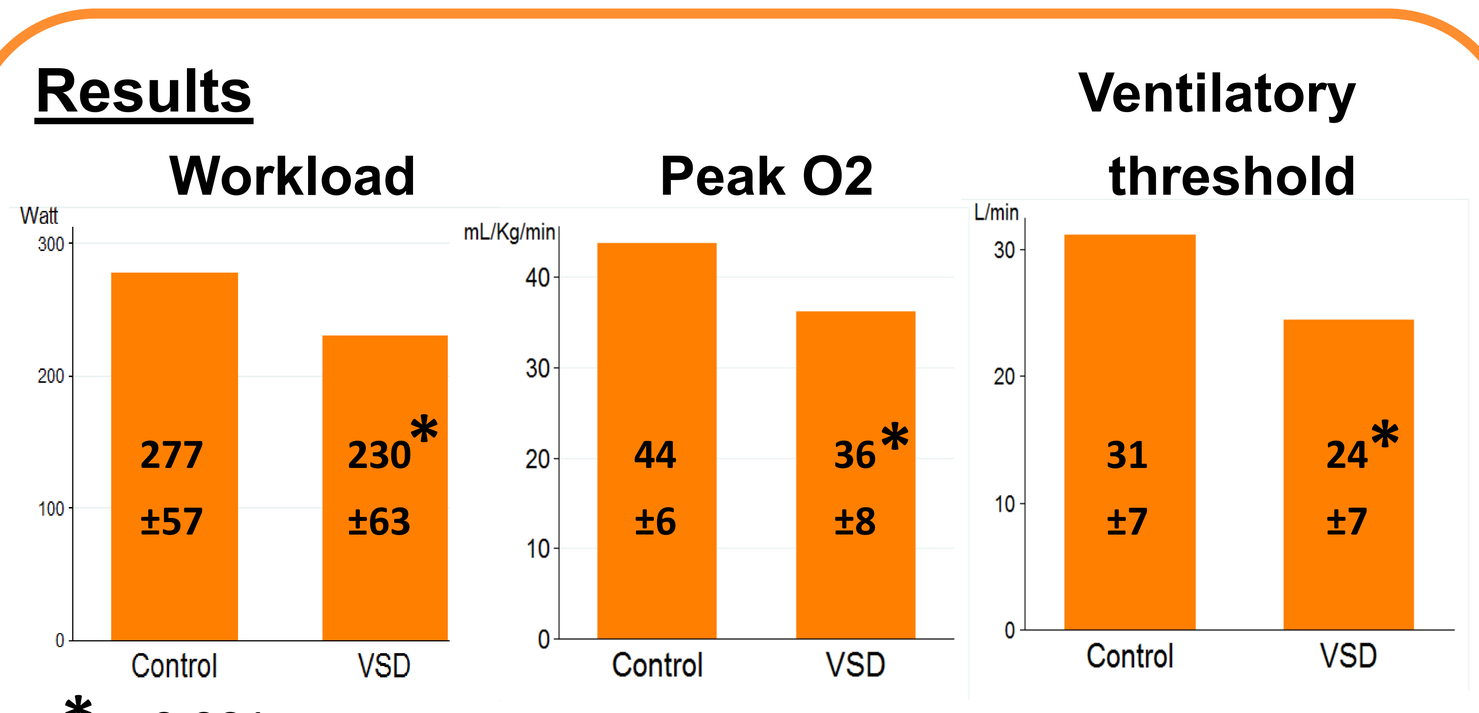
Material & Methods

- Patients with small, unrepaired VSDs (all with a QpQs < 1.5) and healthy controls, matched on age and gender
- Upright bicycle test with an incremental workload protocol of 8-12 minutes, until exhaustion
- Endpoints determined using a breath-by-breath technique

Results

	Controls N = 28	Patients N = 34
Age, years	26.9 ±5	26.5 ±6
Body Mass Index	22.8 ±3	24.0 ±3
Lean body mass, %	77.0 ±6	75.6 ±9
Heart $Rate_{max}$, beats per minute	182.0 ±9	183.7 ±10
Respiratory Exchange Ratio	1.3 ±0.1	1.3 ±0.1
Test time, minutes	10.0 ±2	9.9 ±2

Results



*p<0.001

Conclusion

Compared with healthy controls, patients with small, unrepaired VSDs demonstrate:

- Lower peak VO_2 per Kg
- Lower ventilatory threshold
- Lower workload (watt)

TAKE HOME MESSAGE

Small, unrepaired VSDs reveal lower exercise capacity when matching with healthy peers with comparable physical activity levels and body composition.

Small, unrepaired VSDs— Not just innocent bystanders

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