



# Randomised Evaluation of Modified Valsalva Effectiveness in Re-Entrant Tachycardias (REVERT)

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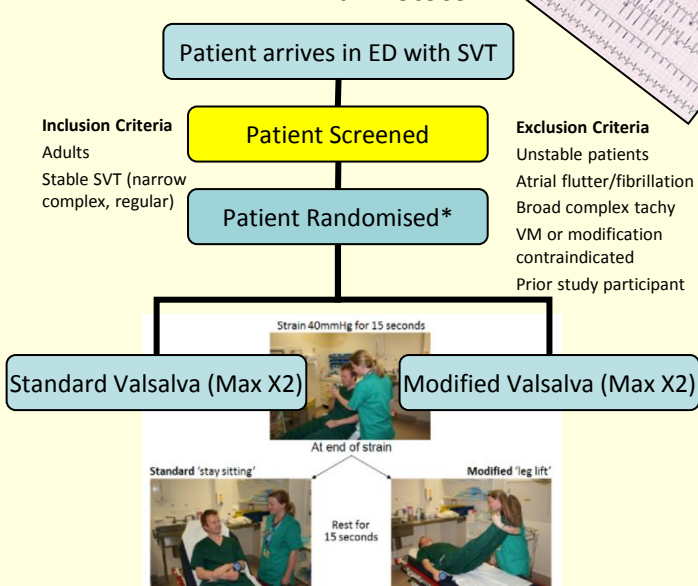
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**REVERT is the first randomised controlled trial to investigate the use of a modified Valsalva manoeuvre to treat patients presenting with SVT in the emergency department.**

**BACKGROUND:** The Valsalva manoeuvre is an internationally recommended physical emergency treatment for supraventricular tachycardia (SVT), an abnormal fast heart rhythm. However in normal practice, the manoeuvre only works in 5–20% of cases and intravenous treatment with adenosine is required. This drug causes a pause in heart activity which patients often find very distressing. A simple posture modification to the Valsalva manoeuvre could improve its effectiveness and we carried out a randomised controlled trial to assess whether it could increase the rate of cardioversion and reduce use of adenosine.

## METHODS:

### REVERT Trial Protocol



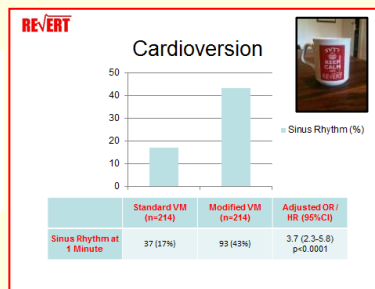
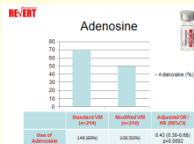
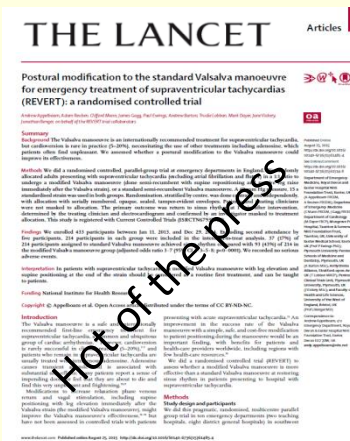
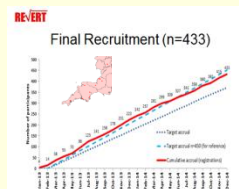
### Primary outcome

Return to sinus rhythm at 1 minute, determined by ECG and confirmed by an investigator blind to treatment allocation

\*Central independent 1:1 randomisation stratified by centre. This study is registered with Current Controlled Trials (ISRCTN67937027).

## RESULTS:

We enrolled 433 participants in 10 emergency departments in the South- West. 5 duplicate cases were excluded. In an intention-to-treat analysis, 37 (17%) of 214 participants assigned to standard Valsalva manoeuvre achieved sinus rhythm compared with 93 (43%) of 214 in the modified Valsalva manoeuvre group (adjusted odds ratio 3.7 (95% CI 2.3–5.8; p<0.0001). Adenosine use was also significantly reduced in the modified group. We recorded no serious adverse events. Groups were well matched and achieved the same strains.



**CONCLUSIONS:** In patients with supraventricular tachycardia, a modified Valsalva manoeuvre with leg elevation and supine positioning at the end of the strain significantly increases cardioversion to sinus rhythm, reduces use of adenosine and should be considered as a routine first line treatment

**Number of modified Valsalvas needed to prevent treatment with adenosine=3**

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# REVERT Trial Protocol\*

## Inclusion Criteria

- Adults
- Stable SVT (narrow complex, regular)

## Exclusion Criteria

- Unstable patients
- Atrial flutter/fibrillation
- Broad complex tachy
- VM contraindicated
- If modification could cause harm
- Prior study participant

