**Supplemental Table 1.** Analysis of inconsistency between direct and indirect comparison

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Endpoint** | **Comparison** | **Q Statistics****Network** | **Q Statistics****Direct**  | **Q Statistics****Indirect** | ***p* value** |
| **Return to sinus rhythm at initial response** | **CSM****vs****MVM** | -1.70 | -1.57 | -5.57 | 0.22 |
| **CSM****vs****SVM** | -0.68 | -0.98 | 0.99 | 0.22 |
| **MVM****vs****SVM** | 1.02 | 1.02 | N/A | N/A |
| **Return to sinus rhythm at the end of study** | **CSM****vs****MVM** | -1.29 | -2.23 | -1.20 | 0.34 |
| **CSM****vs****SVM** | -0.50 | -0.44 | -3.00 | 0.19 |
| **MVM****vs****SVM** | 0.79 | 0.79 | 1.85 | 0.39 |
| **Adverse events of each maneuver** | **CSM****vs****MVM** | -0.11 | -0.03 | -0.37 | 0.93 |
| **CSM****vs****SVM** | 0.08 | 0.00 | 0.33 | 0.93 |
| **MVM****vs****SVM** | 0.20 | 0.20 | N/A | N/A |

CSM, carotid sinus massage; MVM, modified Valsalva maneuver; SVM, standard Valsalva maneuver; N/A, not applicable.

**Supplemental Figure 1.** Funnel plots in return to sinus rhythm at (A) initial response, (B) end of study and (C) adverse events in random-effect model with Egger test.



**Supplemental Table 2.** Sensitivity analysis using different models

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Endpoint** | **Comparison** | **Bayesian****Random****(RR; 95%CrI)** | **Bayesian****Fixed****(RR; 95%CrI)** | **Frequentist****Fixed(RR; 95%CI)** |
| **Return to sinus rhythm at initial response** | **MVM vs SVM** | **2.96(2.20 – 4.23)** | **2.90****(2.38 – 3.60)** | **2.77(2.26 – 3.41)** |
| **MVM vs CSM** | **4.65(1.64 – 16.03)** | **4.30****(1.82 – 14.50)** | **5.47(1.77 – 16.93)** |
| **CSM vs SVM** | 0.63(0.18 – 1.88) | 0.68(0.20 – 1.62) | 0.51(0.16 – 1.58) |
| **Return to sinus rhythm at the end of study** | **MVM vs SVM** | **2.32(1.98 – 2.81)** | **2.26(1.99 – 2.58)** | **2.20(1.94 – 2.50)** |
| **MVM vs CSM** | **3.50(1.99 – 6.64)** | **3.43(2.03 – 6.00)** | **3.62(2.04 – 6.39)** |
| **CSM vs SVM** | 0.66(0.35 – 1.23) | 0.66(0.38 – 1.09) | 0.61(0.35 – 1.07) |
| **Adverse events of each Valsalva maneuver** | **MVM vs SVM** | 1.37(0.94 –1.99) | **1.40****(1.03 –1.91)** | 1.22(0.88 – 1.69) |
| **MVM vs CSM** | 7.6×10-3(3.99×10-7 – 1.16) | 3.3×10-3(9.34×10-9 – 1.94) | 1.12(0.04 – 32.68) |
| **CSM vs SVM** | 390.0(0.27 –1.29×1011) | 122.0(0.29 –1.07×107) | 1.09(0.04 – 31.69) |

CI, confidence interval; CrI, credible interval; CSM, carotid sinus massage; MVM, modified Valsalva maneuver, RR, relative risk; SVM, standard Valsalva maneuver.

**Supplemental Table 3. Pairwise meta-analysis by direct comparison in inverse variance heterogeneity model**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Endpoint** | **Comparison** | **RR****(95% CI)** | **I2** | **LFK index** |
| **Return to sinus rhythm at the end of study** | **CSM****vs****MVM** | N = 1 | 9.28(1.25 – 69.13) | N/A1 | N/A2 |
| **SVM****vs****CSM** | N = 2 | 1.55(0.88 **–** 2.73) | 0% | N/A2 |
| **MVM****vs****SVM** | N = 13 | 2.20(1.94 **–** 2.49) | 0% | 3.5 |
| **Adverse events of each maneuver** | **MVM****vs****CSM** | N = 1 | 1.03(0.02 – 50.42) | N/A1 | N/A2 |
| **SVM****vs****CSM** | N = 1 | 1.00(0.02 – 48.96) | N/A1 | N/A2 |
| **MVM****vs****SVM** | N = 13 | 1.22(0.88 **–** 1.69) | 0% | -2.1 |

1 I-sqaure cannot be calculated when enrollment of only one study.

2 LFK index cannot be calculated when enrollment of only one or two studies.

CI, confidence interval; CSM, carotid sinus massage; MVM, modified Valsalva maneuver; RR, relative risk; SVM, standard Valsalva maneuver; LFK, Luis Furuya-Kanamori; N/A, not applicable.