

Atrial fibrillation recurrence-free rate after pulmonary vein isolation with and without non-pulmonary vein trigger ablation: a systematic review and meta-analysis

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BACKGROUND

- Pulmonary vein isolation (PVI): a well-accepted treatment for atrial fibrillation
- The success rate of PVI depends on many factors.
- Non-pulmonary vein triggers are one of the main factors of arrhythmia recurrence after catheter ablation.
- Whether **PVI plus non-pulmonary vein trigger ablation** improves the outcome of atrial fibrillation ablation is unclear.
- We, therefore, conducted a meta-analysis to compare the atrial fibrillation recurrence-free rate after PVI alone and PVI plus non-pulmonary vein trigger ablation.

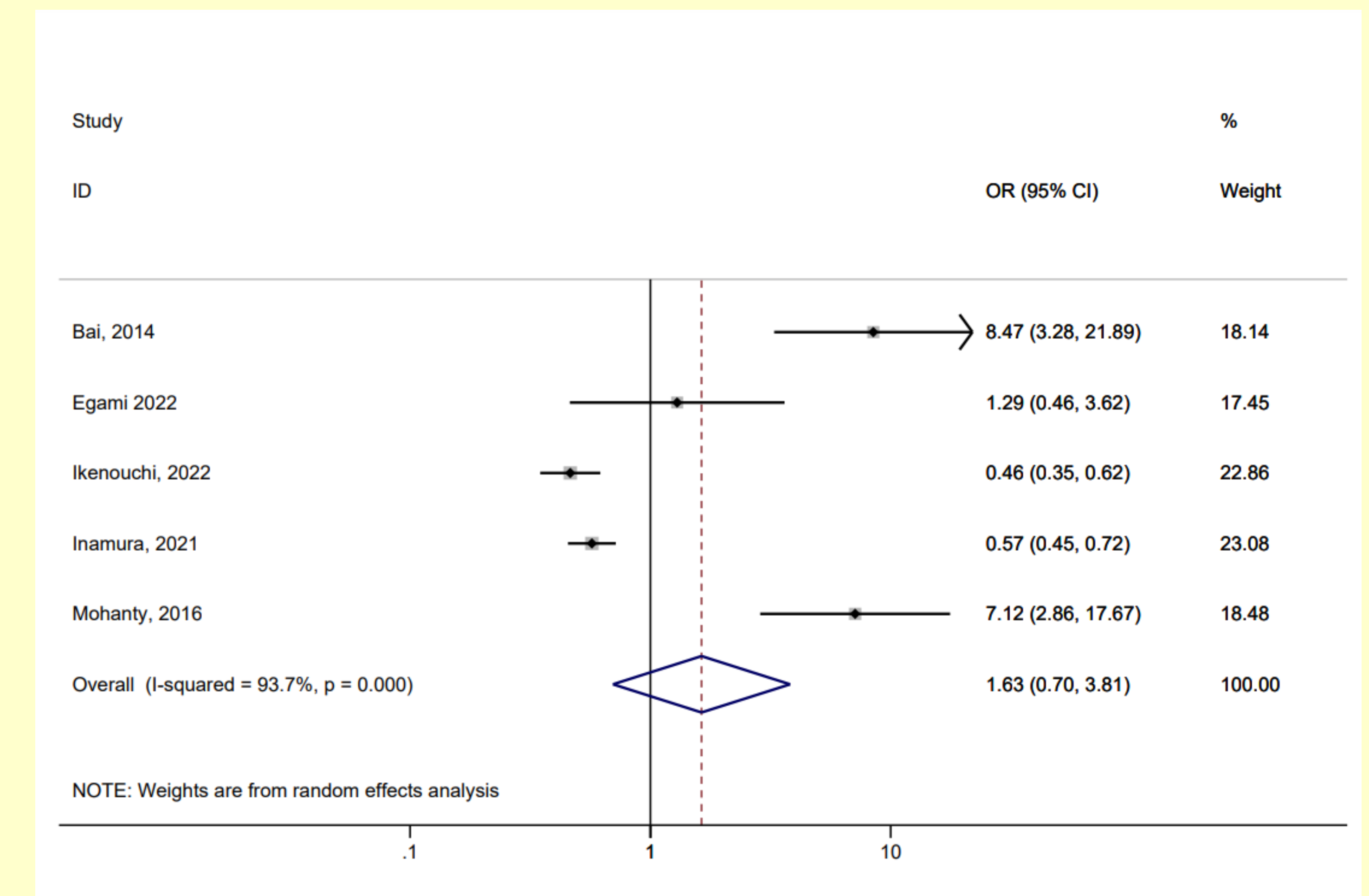
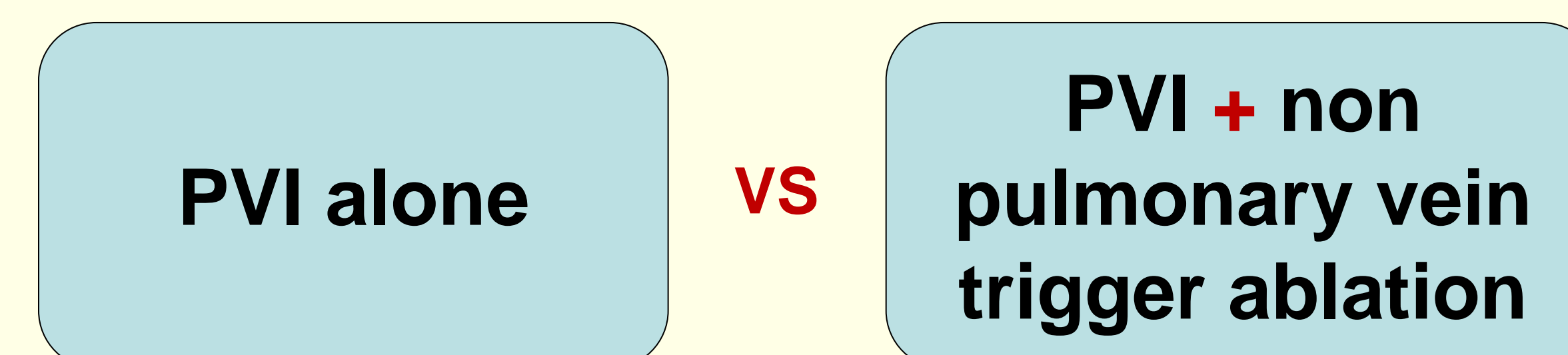


Figure 1 Forest plot demonstrating the association between Atrial fibrillation recurrence rate after pulmonary vein isolation with and without non-pulmonary vein trigger ablation.

RESULTS

- 5 cohort studies
 - 3,885 atrial fibrillation patients underwent PVI alone
 - 1,277 patients underwent PVI plus non-pulmonary vein trigger ablation
 - Included in our studies
- **No statistical difference** in atrial fibrillation recurrence-free rate between



- Pooled OR = 1.632, 95% CI 0.699-3.812, p-value = 0.000, I² 93.7%

METHODS

- **Databases:** MEDLINE and EMBASE from the inception to December 30, 2022
- **Cohort studies:** that evaluate the atrial fibrillation-free rate after PVI with and without non-pulmonary vein trigger ablation were included
- Data from each study were combined using the random-effects model to calculate pooled odds ratio (OR) with 95% confidence interval (CI).

CONCLUSIONS

- The atrial fibrillation recurrence-free rate after PVI alone is not statistically different from PVI plus non-pulmonary vein trigger ablation.
- Larger studies are needed to clarify this outcome.

