

## Delayed versus Early cardioversion for patients with uncomplicated atrial fibrillation: Meta-analysis

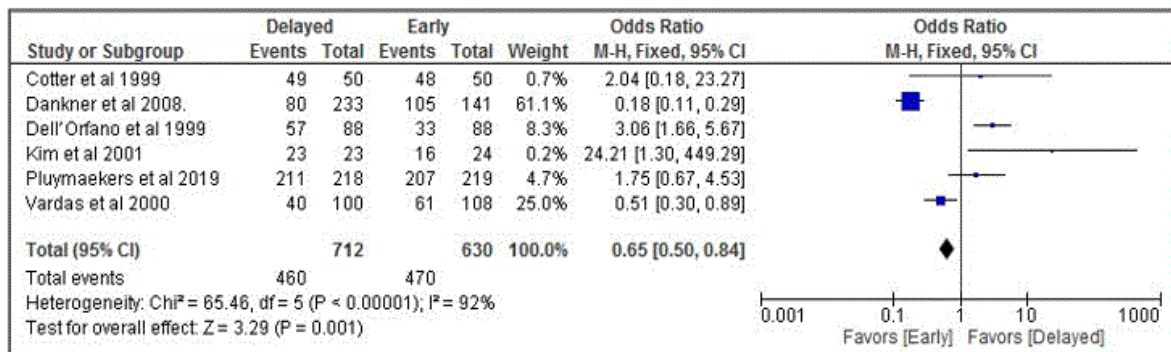
**Background:** Prior studies have conflicting results about whether urgent restoration of sinus rhythm (RSR) is favorable in atrial fibrillation (AF) outcomes. Hence, we did a meta-analysis to assess the outcomes of early cardioversion (EC) versus spontaneous and delayed cardioversion (SDC) in patients with primary AF.

**Methods:** PubMed, Cochrane Library, and Web of Science databases were searched for studies evaluating the RSR in adults AF patients who were hemodynamically stable. We grouped SDC patients as they were treated with the wait and rate control approach for at least 48 hours. Primary endpoints were RSR within index admission and at the follow-up visit. Secondary outcomes were mortality, major adverse cardiac events (MACE), and cost. Odds ratio and 95% confidence interval were used to evaluate the categorical variables. The analysis was done with the DerSimonian and Laird random-effects model.

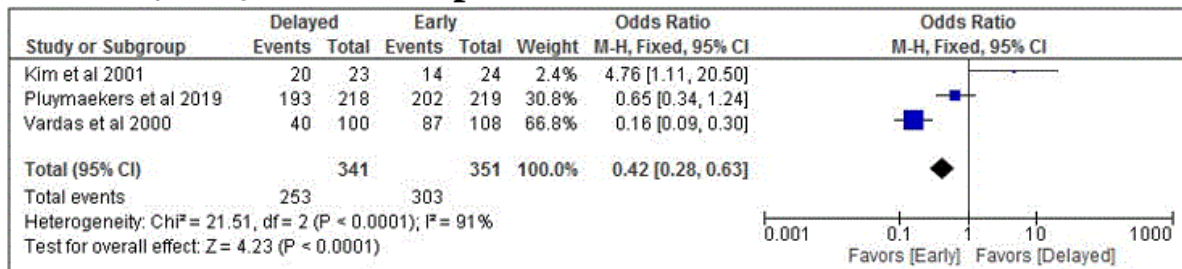
**Results:** Three randomized control trials and three retrospective studies met the criteria for inclusion with a total of 1342 patients (EC 630 and SDC 712). The mean age was 66.2 years old, and 45% were male. Patients in the EC group had a higher RSR (Figure 1-A, B) and costs, but less rate of MACE and mortality. However, there was not enough data to statistically compare the secondary outcomes. (Figure1-C)

**Conclusion:** Our analysis suggests that patients who had EC had a higher RSR during admission and at follow-up visit compared to SDC and possibly improved outcomes. Worse outcomes in the SDC need further exploration.

**Figure 1-A :**  
**Events (RSR) during index admission :**



**Figure 1-B :**  
**Events (RSR) at follow up :**



**Figure 1-C :**

	EC	DSC
Sinus rhythm - Index admission (%)	86%	69%
Sinus rhythm - Follow up (%)	74%	64%
Mean follow up duration (Days)	34	39
Cost (\$)	\$6,738	\$4,357
MACE (number of events)	8	11
Mortality (number of events)	0	3