

COMPARATIVE EFFECTIVENESS OF ALLOPURINOL AND FEBUXOSTAT FOR THE RISK OF ATRIAL FIBRILLATION IN THE ELDERLY

Jasvinder A Singh^{1,2} and John D Cleveland²

¹Alabama VA Medical Center, USA

²University of Alabama at Birmingham, USA

Objective: Gout is associated with a higher risk of atrial fibrillation (AF). The main objective of the study was to find the comparative effectiveness of allopurinol or febuxostat in reducing the AF risk which is unknown.

Methods: We used the 5% medicare beneficiary cohort (65 years) from 2006-2012 to identify people with a new filled prescription for allopurinol or febuxostat, with a baseline period of 365 days without either medication. We used 5:1 propensity-matched Cox regression analyses to assess whether allopurinol use differed from febuxostat use regarding the hazard ratio (HR) of incident AF.

Results: We found 25,732 eligible episodes in 23,135 beneficiaries. Of these, 2,311 incident allopurinol or febuxostat use episodes (9%) ended in incident of AF with crude incidence rates of 8.0 and 10.5 per 100 person-years, respectively. In propensity-matched analyses, compared to allopurinol, febuxostat was associated with higher hazard ratio (HR) of AF, 1.25 (95% CI: 1.05, 1.48). Compared to allopurinol <200 mg/day, febuxostat 80 mg/day was associated with significantly higher HR of AF, 1.62 (95% CI: 1.16, 2.27), but not febuxostat 40 mg/day or higher allopurinol doses. Compared to 1-180 days of allopurinol use, febuxostat use for 1-180 days was associated with significantly higher HR of AF, 1.36 (95% CI: 1.10, 1.67), but longer durations were not.

Conclusions: Febuxostat was associated with a higher risk of AF compared to allopurinol in older adults. Increased AF risk was noted with febuxostat 80 mg/day dose and was most evident in the first 6-months of use. These findings need replication.

Jasvinder.md@gmail.com