RISK OF INCIDENT CARDIOVASCULAR EVENTS WITH DISEASE-MODIFYING ANTIRHEUMATIC DRUGS COMBINATIONS AMONG ADULT PATIENTS WITH RHEUMATOID ARTHRITIS

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Background

- Patients with rheumatoid arthritis (RA) have 2 times risk of cardiovascular diseases (CVD).[1-3]
- Methotrexate (MTX) and tumor necrosis factor inhibitors (TNFi) have reduced CV risk.[4-5]
- Limited CV evidence for other disease-modifying antirheumatic drugs (DMARDs).

Objectives

To evaluate the CV risk with DMARDs as monotherapy and combination therapy in RA.

Methods

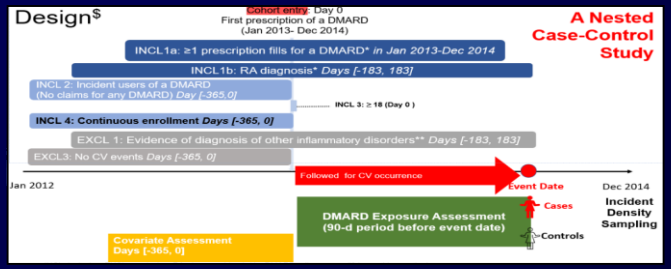
Data: MarketScan Database (2012-2014)

Study Design: A nested case-control study

Study Population: adult RA patients initiating either a conventional synthetic (cs) DMARD, biologic DMARD, or targeted synthetic (ts) DMARD between Jan 1, 2013, and Dec 31, 2014 (cohort entry) and had no CV history

- Cases: individuals with incident CV events
- Controls: 10 age and sex-matched controls were selected per each case using the incident density sampling with replacement.

Conditional logistic regression: evaluated the association of risk of CV events with DMARDs in combination treatment or individual use, with reference to MTX monotherapy, adjusting for baseline confounders



Results

162,072 RA Pts in MarketScan

60,794 RA Pts with a DMARD prescription between 2013-2014 (cohort entry)

27,823 Pts after excluding prevalent users of DMARD (no DMARD in12-mo pre- cohort entry)

18,934 Pts Continuous enrollment in 12-mo pre- cohort entry (baseline period)

27,279 Adults

24,967 Pts after excluding inflammatory disorders in during the 6-mo from cohort entry

24,860 Pts after excluding pts with any medical or procedure claim for CV outcome in the 12-mo pre- cohort entry = Base cohort

- A total of 270 cases of incident CV events and 2,700 controls were included (mean [standard deviation (SD)] age: 54 [8]; 75.6% women).
  - csDMARDs monotherapy (n=795, 27.04%)
  - TNFi monotherapy (n=367, 12.48%)
  - TNFi in combination with MTX (n=314, 10.68%).
- Compared with MTX monotherapy, overall use of DMARDs agents was not associated with the risk of CV, including various types of DMARDs combination regimens.

DMARDs Exposure Type ‡,*	Patients, n (%) **		Adjusted Odds Ratio (95% CI)		P
	Cases (N=270, %) **	Controls (N=2700, %) **	aOR	95% CI	
TNFi+MTX	37 (13.75)	277 (10.37)	1.306	0.578-2.952	0.52
Non-TNFi Biologics+MTX	2 (0.74)	38 (1.42)	0.844	0.157-4.547	0.84
csDMARD +MTX	27 (10.04)	268 (10.03)	0.859	0.375-1.971	0.72
TNFi	43 (15.99)	324 (12.13)	1.379	0.627-3.032	0.42
Non-TNFi Biologics	9 (3.35)	78 (2.92)	0.925	0.299-2.859	0.89
csDMARD	121 (44.98)	674 (25.23)	1.552	0.766-3.144	0.22
MTX Monotherapy	11 (4.09)	151 (5.65)	1 [Reference]		

Conclusions

- No differential risk of CV events with DMARDs in combination or monotherapy compared to MTX monotherapy in RA.
- More work is needed to understand the long-term CV risk of these DMARDs in RA

References

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