Additional File 3

Bredemeier et al. Xanthine Oxidase Inhibitors for Prevention of Cardiovascular Events: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. BMC Cardiovascular Disorders.

DESCRIPTION OF STUDIES EXCLUDED FROM THE META-ANALYSIS AFTER EVALUATION IN FULL-TEXT FORMAT

1) Initial systematic literature search from inception to Sep 29, 2014 (subtitles represent the reasons for exclusion).

Absence of placebo or no-treatment group

1. Becker MA, Schumacher HR, MacDonald PA, Lioyd EJ, Lademacher C, Joseph-Ridge N. Orate-lowering therapy in subjects with gout: Interim results from the febuxostat/allopurinol comparative extension long-term study (EXCEL). Annals of the Rheumatic Diseases 2007;66:230-1.

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Study protocol

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Intervention and control groups differ not only on use of XOI

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Results could not be translated

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Abstracts or full-text articles with no extractable data

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Abstracts or full-text articles with no extractable data

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1. Pour-Pouneh M, Narimani R, Mardani S, Momeni A, Nasri H, Author A, et al. Evaluation of the relationship between the reduction of serum uric acid level and control of blood pressure in patients with hypertension and hyperuricemia. Journal of Isfahan Medical School 2015;33(353):1672-85.

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1. Sanchis-Gomar F, Salvagno GL, Lippi G. Inhibition of xanthine oxidase and exercise on serum uric acid, 25(OH)D3, and calcium concentrations. Clinical laboratory; 2014:1409-11.

2. Sanchis-Gomar F, Pareja-Galeano H, Gomez-Cabrera MC, Candel J, Lippi G, Salvagno GL, et al. Allopurinol prevents cardiac and skeletal muscle damage in professional soccer players. Scand J Med Sci Sports 2015;25(1):e110-5.

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1. Liu P, Chen Y, Wang B, Zhang F, Wang D, Wang Y. Allopurinol treatment improves renal function in patients with type 2 diabetes and asymptomatic hyperuricemia: 3-year randomized parallel-controlled study. Clinical endocrinology; 2015:475-82.

3) Third systematic literature search from Jan 11, 2016 to December 30, 2016 and hand searching process updated to December 30, 2016 (subtitles represent the reasons for exclusion).

OBS: Some of the articles presented in this section were already found in previous searches. The hand searching process was purposely redundant in order in increase sensitivity for eligible articles.

No placebo or no-treatment group

1. NCT01001338- Ardea Biosciences Incorporation. Lesinurad in combination with allopurinol: results of a phase 2, randomised, double-blind study in patients with gout with an inadequate response to allopurinol. In: ClinicalTrials.gov[Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2016 Dec 27] . Available from: https://clinicaltrials.gov/ct2/show/NCT01001338.

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3. Peixoto MR, Monego ET, Jardim PC, Carvalho MM, Sousa AL, Oliveira JS, et al. Diet and medication in the treatment of hyperuricemia in hypertensive patients. Arq Bras Cardiol 2001;76:463-72.

4. Viglioglia PA, Plante GE, Viglioglia J, Saraceno EF. Allopurinol in psoriasis. Dermatologica 1970;141:203-7.

5. Chunyan W, Lixun Z. The cloth division him for treatment of gout with high uric acid hematic disease analysis. Health Way 2016:15:15. (article in chinese)

6. Singh G, Kumar H, Soni U, Tyagi S, Aggarwal K, Verma K, et al. "COMPARISON OF URATE-LOWERING EFFICACY AND SAFETY OF FEBUXOSTAT AND ALLOPURINOL IN GOUT PATIENTS". Heterocyclic Letters 2016;6(1):133-47.

Intervention group received XOI or uricosuric at investigator's discretion

1. Tan Y, Fu JZ, Liang M, Lin ZX, Huang J. Clinical observation of the effect of allopurinol to protect renal function in patients with diabetic nephropathy. Modern Hospital 2011;11:36–8. (article in chinese)

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2. Smith MJ. Placebo versus allopurinol for renal calculi. J Urol 1977;117:690-2.

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8. Steubl D, Michel MC. Experimental and clinical nephroprotection by the xanthine oxidase inhibitor febuxostat. Naunyn-Schmiedeberg's Archives of Pharmacology 2016;389(8):815-7.

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Study protocol

1. Oyama J, Tanaka A, Sato Y, Tomiyama H, Sata M, Ishizu T, et al. Rationale and design of a multicenter randomized study for evaluating vascular function under uric acid control using the xanthine oxidase inhibitor, febuxostat: the PRIZE study. Cardiovasc Diabetol 2016;15:87.

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2. NCT01228903 – University of Colorado, Denver. Uric Acid and the Endothelium in CKD. In: ClinicalTrials.gov[Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2016 Dec 27]. Available from:http://www.clinicaltrial.co/ShowTrial/NCT01228903.

3. NCT02327754 – Sanwa Kagaku Kenkyusho Company. Effect of Topiroxostat on Urinary Albumin Excretion Early Stage Diabetic Nephropathy and Hyperuricemia With or Without Gout. In: ClinicalTrials.gov[Internet]. Bethesda (MD): National Library of Medicine (US). 200- [cited 2016 Dec 27] . Available from: https://clinicaltrials.gov/ct2/show/NCT02327754.

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6. Dalbeth N, Saag KG, Palmer W, Choi H, Hunt B, MacDonald P, Thienel U, Gunawardhana L. Imaging and Safety Assessments Following Treatment with Febuxostat and Placebo for 2 Years in Subjects with Early Gout [abstract]. Arthritis Rheumatol. 2015; 67 (suppl 10). http://acrabstracts.org/abstract/imaging-and-safety-assessments-following-treatment-with-febuxostat-and-placebo-for-2-years-in-subjects-with-early-gout/.

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17. NCT02038179 - University of Alabama at Birmingham. UAB Center of Research Translation (CORT) Project 2: The Effects of Urate Lowing Therapy (ULT) in Inflammation, Endothelial Function, and Blood Pressure. In: ClinicalTrials.gov[Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2016 Dec 27]. Available from: https://clinicaltrials.gov/ct2/show/NCT02038179

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Rev Med Pharmacol Sci. 2016;20(4):756-61.

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2. NCT00477789 - Universita di Verona. Effects of Allopurinol on Diastolic Function in Chronic Heart Failure Patients. In: ClinicalTrials.gov[Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2016 Dec 27]. Available from: https://clinicaltrials.gov/ct2/show/NCT00477789

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Already found in systematic literature search

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8. Salim AS. The role of oxygen-derived free radicals in the management of venous (varicose) ulceration: a new approach. World J Surg 1991;15:264-9.