

KSN 2017 Abstract

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Febuxostat in the Reduction of Serum Uric acid in Patients at risk of Tumor Lysis Syndrome: A Systematic Review

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Objectives : To assess the effect of Febuxostat in serum uric acid reduction in patients at risk of tumor lysis syndrome

Methods : Online databases (PubMed, Medline EMBASE and Cochrane Library) were used to search for records through 2010 to 2016 using the following terms: Febuxostat, Prevention of tumor lysis syndrome, malignancies. A total of 11 potential papers were identified. The abstracts and full-text articles of potentially relevant papers were screened to determine eligibility. Full copies of the articles that met the inclusion criteria were retrieved. Data from chosen articles were appraised to come up with a descriptive analysis.

Results : Five studies were included in this systematic review. Two studies were randomized controlled trials (RCTs) and three studies were cohort studies (prospective and retrospective). The diagnoses of the included studies were leukemias, lymphomas and solid tumor. Febuxostat showed significant reduction in terms of serum uric acid levels and area under the curve with mean duration of 5–9 days. In terms of kidney function, one study noted simultaneous decrease in serum creatinine and increase in eGFR. Whereas, two studies demonstrated no change in serum creatinine.

Conclusions : Febuxostat prevents tumor lysis syndrome in patients with intermediate to high risk malignancies as it leads to a decrease in serum uric acid preventing development of urate crystal precipitation in renal tubules.

Keywords : Febuxostat, Tumor lysis syndrome, prevention, malignancies, systematic review