ALLOPURINOL IN THE TREATMENT OF SCHIZOPHRENIA: A SYSTEMATIC REVIEW

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INTRODUCTION:

There is some evidence that the adenosine neuromodulation system is involved in the pathophysiology of schizophrenia. Hence, allopurinol, a xanthine oxidase inhibitor, which increases extracellular adenosine might be a therapeutic option in schizophrenia. Since allopurinol is widely available and inexpensive, it could be an interesting addition to the therapeutic arsenal of schizophrenia, if it proved to be efficient and well tolerated.

OBJECTIVE:

We aimed to examine the available evidence regarding the use of allopurinol in schizophrenia.

MATERIALS AND METHODS:

A systematic review of the literature was conducted by searching the MEDLINE and PsycINFO databases using the following keywords: (allopurinol) AND (schizophrenia). All article types were included.

RESULTS:

The search yielded 18 results. After title and abstract verification, 14 articles were included: one meta-analysis, four reviews, four trials, and five case reports/series.

CLINICAL TRIALS:

Table 1: Clinical trials of allopurinol in schizophrenia

Author	Study design	Medications	Response	Duration	Dose	Comments
(Akhoondzadeh et al., 2005)	double-blind, placebo-controlled trial	Allopurinol or placebo + haloperidol	-PANSS total, positive: Allopurinol > Placebo -PANSS negative, general: Allopurinol = Placebo	8 weeks	300 mg daily	Allopurinol group reported lower incidence of extrapyramidal symptoms
(Brunstein et al., 2005)	double-blind, placebo-controlled trial with crossover	Allopurinol plus chlorpromazine equivalent 550. Placebo plus chlorpromazine equivalent 545	-PANSS total, positive, general: Allopurinol > Placebo -PANSS negative: Allopurinol = Placebo	12 weeks	600 mg daily	One patient developed skin rash
(Dickerson et al., 2009)	double-blind, placebo-controlled trial	Allopurinol or placebo + (12% first generation antipsychotic or 88% second generation antipsychotic).	-PANSS total, positive, negative, general: Allopurinol = Placebo -Brief cognitive battery: Allopurinol = Placebo	8 weeks	600 mg daily	Patients are more likely to rate themselves as improved.
(Weiser et al., 2012)	double-blind, placebo-controlled trial	Allopurinol plus chlorpromazine equivalent 809.7. Placebo plus chlorpromazine equivalent 647.7	-PANSS (total, positive, negative, general), BACS: Allopurinol = Placebo	8 weeks	600 mg daily	

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