

Clinical experience of optimising co-administration therapy of low dose allopurinol with low dose thiopurines in Inflammatory Bowel Disease patients attending a Virtual pharmacist clinic

F. Fuertes, S. Abdel-Aziz, D. Bullas. Barnsley Hospital NHS Foundation Trust (BHNFT), United Kingdom

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Background

Thiopurines play an important role in maintaining remission in Inflammatory Bowel Disease (IBD). Optimising therapeutic strategies is of paramount importance in preventing treatment failure. Co-administration of Allopurinol, a Xanthine Oxidase (XO) inhibitor, with thiopurines has become established practice to achieve target thioguanine concentrations. The recommended dose of Allopurinol is 100 mg combined with modified thiopurine dosing (<25% of standard dose).

Purpose

The aim of the study is to explore whether Allopurinol 50 mg can achieve the correct thioguanine nucleotide to methylmercaptopurine (TGN:MeMP) ratio while observing the side effect and safety profile of combined therapy.

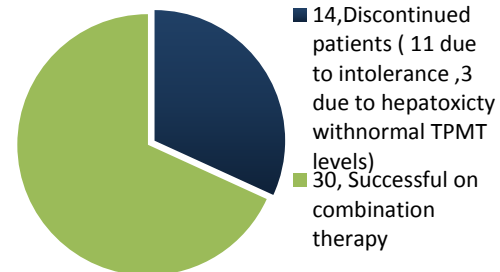
Material and methods

Combined Allopurinol and thiopurines therapy was started in a virtual pharmacist clinic in a cohort of patients who had failed thiopurines monotherapy. Patients were contacted by telephone, text or e-mail according to patients' preference. Thioguanine results were requested from our laboratory and obtained from Guy's NHS Hospital, which recommends the addition of Allopurinol if the ratio TGN:MeMP >11.

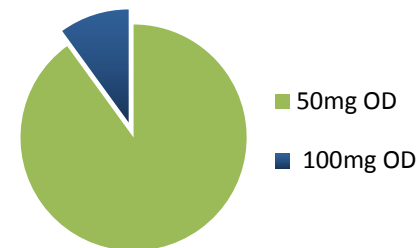
The total number of patients recruited was 44, of which 20 were female, 17 had Crohn's disease, 27 had Ulcerative colitis. The average weight was 86 kg. 2 patients were TPMT carriers ([10-25] pmol/h/mgHb), the rest were normal [26-51]. Azathioprine dosing range was [0.12-0.64] mg/kg (23 patients); 6-Mercaptopurine dosing range was [0.11-0.54] mg/kg (21 patients).

Results

Results out of 44 patients



Dose of allopurinol successful on combination therapy (n=30)



Conclusion

- ✓ The majority of patients (90%) obtained an effective TGN:MeMP ratio with reduced Allopurinol dosing at 50 mg.
- ✓ Patients that did not achieve this ratio (10%) responded to dose escalation at 100 mg.
- ✓ TPMT status did not appear to influence the effect of low dose Allopurinol.
- ✓ Hepatotoxicity may still occur with combined Allopurinol and thiopurines therapy.
- ✓ Low dose Allopurinol may be considered a viable therapeutic strategy providing that appropriate clinical and biochemical surveillance is maintained.

