

# Colestipol: A More Pleasant Alternative to Cholestyramine for Leflunomide Washout

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## Case Presentation

- 34-year-old female, G0P0, presented to clinic for consultation prior to conception
- Patient had seronegative inflammatory arthritis treated with leflunomide (a category X drug)
- Cholestyramine, a bile acid sequestrant and oral suspension, was offered as the agent to complete a washout of leflunomide prior to attempting conception
  - Cholestyramine washout procedure found in Figure 1
- Patient requested to use colestipol, another bile acid sequestrant, but in pill form
  - Colestipol washout procedure used found in Figure 2
- Colestipol was used in the washout process found in Figure 2 and was successful in clearing leflunomide prior to attempting conception

## Figure 1

- 8 grams TID for 11 days
- Verify plasma levels less than 0.02 mg/L by two separate tests at least 14 days apart.
- If plasma levels are higher than 0.02 mg/L, additional cholestyramine treatment should be considered.



Figure 1. The cholestyramine washout procedure and a picture of the route of administration as an oral suspension

## Figure 2

- Take colestipol 8 mg BID for 15 days, obtain a drug level test, do another trial of the colestipol for 15 days, and then obtain another drug level test to ensure the elimination.
- The drug tests must be 14 days apart and report back a level less than 0.02 mg/L prior to conception.



Figure 2. The colestipol washout procedure and a picture of the route of administration as a pill

## Discussion

- Bile acid sequestrants such as cholestyramine and colestipol can be used as leflunomide elimination agents due to their mechanism of action of forming nonabsorbable complexes with bile acids as well as the active metabolites of leflunomide within the intestine
- Currently there are no prior case reports using colestipol for leflunomide washout, but this clinical case report shows that it can be effective
- An extensive literature search did not reveal any prior studies comparing compliance of oral suspensions versus pills
- Per GoodRx, both medications are equivalent in price for the washout process
- This clinical case demonstrates colestipol as a more pleasant alternative that can accelerate the drug elimination of leflunomide while in the form of pills rather than an unsavory liquid drink with cholestyramine

## Conclusion

- Cholestyramine and colestipol have the same mechanism of action and therefore are effective at increasing the elimination of leflunomide
- The powder of cholestyramine mixed with water has an unsavory taste and is difficult to consume. Colestipol on the other hand, is in the pill form and may be a better alternative

## References

- Lexicomp. (n.d.). Leflunomide: Drug Information. UpToDate. Retrieved August 24, 2020, from [https://www.uptodate.com/contents/leflunomide-drug-information?search=leflunomide&source=panel\\_search\\_result&selectedTitle=1~84&usage\\_type=panel&tab=drug\\_general&display\\_rank=187187102](https://www.uptodate.com/contents/leflunomide-drug-information?search=leflunomide&source=panel_search_result&selectedTitle=1~84&usage_type=panel&tab=drug_general&display_rank=187187102)
- Levy, Roger A., De Jesus, Guillermo R., De Jesus, Nelson R., & Kurih, Evandro M. (2010). Critical review of the current recommendations for the treatment of systemic inflammatory rheumatic diseases during pregnancy and lactation. *Autoimmunity Reviews*, 15(10), 955-963.
- Cohen, S., & Carrozzini, A. (2020). Treatment of rheumatoid arthritis in adults resistant to initial conventional nonbiologic DMARD therapy. In P. L. Romain (Ed.), *UpToDate*. Retrieved August 24, 2020, from [https://www.uptodate.com/contents/treatment-of-rheumatoid-arthritis-in-adults-resistant-to-initial-conventional-nonbiologic-dmard-therapy?search=leflunomide&source=panel\\_search\\_result&selectedTitle=3~84&usage\\_type=panel&tab=drug\\_general&display\\_rank=1871871031999010](https://www.uptodate.com/contents/treatment-of-rheumatoid-arthritis-in-adults-resistant-to-initial-conventional-nonbiologic-dmard-therapy?search=leflunomide&source=panel_search_result&selectedTitle=3~84&usage_type=panel&tab=drug_general&display_rank=1871871031999010)
- Lexicomp. (n.d.). Cholestyramine: Drug Information. UpToDate. Retrieved August 24, 2020, from [https://www.uptodate.com/contents/cholestyramine-drug-information?search=cholestyramine&source=panel\\_search\\_result&selectedTitle=1~15&usage\\_type=panel&tab=drug\\_general&display\\_rank=187187100469](https://www.uptodate.com/contents/cholestyramine-drug-information?search=cholestyramine&source=panel_search_result&selectedTitle=1~15&usage_type=panel&tab=drug_general&display_rank=187187100469)
- Lexicomp. (n.d.). Colestipol: Drug Information. UpToDate. Retrieved August 24, 2020, from [https://www.uptodate.com/contents/colestipol-drug-information?search=colestipol&source=panel\\_search\\_result&selectedTitle=1~7&usage\\_type=panel&tab=drug\\_general&display\\_rank=187187100469](https://www.uptodate.com/contents/colestipol-drug-information?search=colestipol&source=panel_search_result&selectedTitle=1~7&usage_type=panel&tab=drug_general&display_rank=187187100469)
- Cholestyramine 4gm packets [Online Image]. Walgreens. <https://www.walgreens.com/rx-druginfo/pharmacy/fndrugdruginfo/details?drugid=15212>
- Cholestyramine 4gm packets [Online Image]. Walgreens. <https://www.walgreens.com/rx-druginfo/pharmacy/fndrugdruginfo/details?drugid=15212>
- Colestipol Hydrochloride 1000 MG Oral Tablet [Online Image]. National Library of Medicine. [https://pubmed.ncbi.nlm.nih.gov/RetImage/imageimages/gallery/1024/95762-0450-01\\_RXNIMAGE10\\_863A4302.jpg](https://pubmed.ncbi.nlm.nih.gov/RetImage/imageimages/gallery/1024/95762-0450-01_RXNIMAGE10_863A4302.jpg)