

***Pneumocystis jirovecii* Pneumonia During Treatment of Autoimmune Hepatitis with Oral Budesonide**

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ABSTRACT:

Oral budesonide is an effective therapy for autoimmune hepatitis with fewer side effects compared to oral prednisone. Clinical trials and observational studies of its use in autoimmune hepatitis and Crohn's disease have reported no increase in the incidence of infection, consistent with its first-pass inactivation in the liver. In particular, the opportunistic infection *Pneumocystis jirovecii* pneumonia (PJP) has not been reported with budesonide, a status unique among oral steroids. We herein report two cases of PJP that occurred during budesonide treatment of autoimmune hepatitis. Both patients were started on budesonide despite the presence of cirrhosis and portosystemic shunting, conditions where budesonide use is contraindicated. We hypothesize that PJP infection occurred due to minimal first-pass metabolism of budesonide due to cirrhosis and portosystemic shunting, allowing sufficient systemic drug levels to increase PJP risk. These cases illustrate the importance of identifying signs of developing cirrhosis and/or portosystemic shunting in patients with autoimmune hepatitis while on therapy and substituting other steroids or steroid-sparing agents with the provision of PJP prophylaxis when indicated.