

Poster presentation

Increased ribavirin dose in HIV/HCV co-infected patients leads to increased serum concentration of ribavirin

F Almasi*, G Spiridon, V Jullien, JF Merritet, P Sogni and D Salmon

Address: Cochin Hospital, Paris, France

* Corresponding author

from Ninth International Congress on Drug Therapy in HIV Infection
Glasgow, UK. 9–13 November 2008

Published: 10 November 2008

Journal of the International AIDS Society 2008, **11**(Suppl 1):P287 doi:10.1186/1758-2652-11-S1-P287

This abstract is available from: <http://www.jiasociety.org/content/11/S1/P287>

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Purpose of the study

Ribavirin in combination with pegylated interferon alpha 2a is the standard treatment for chronic HCV hepatitis. Body weight and/or HCV genotype are factors which determine ribavirin dosage. Ribavirin's side-effects, especially anemia, are negatively related to its serum concentration and its efficacy is positively related to serum concentration, respectively.

Methods

Ribavirin's serum concentration was measured in 20 HIV/HCV co-infected patients who were eligible for HCV treatment 4 weeks after treatment commenced. A serum concentration of 2.2 microgram/ml is considered as therapeutic level. Dose of ribavirin was increased as 200 milligram daily (not more than 1,200 mg/day) in patients whose ribavirin serum concentration was less than 2.2 microgram/ml. Hemoglobin levels measured at first day of treatment and 3 months later.

Summary of results

Mean ribavirin serum concentration in 20 patients was 1.96 microgram/ml (R: 0.8–5.2). Seven of 20 (35%) of patients had a serum concentration of ribavirin more than 2.2 microgram/ml (mean: 3) while 13 of 20 patients (65%) had not achieved therapeutic level (mean: 1.4). Dose of ribavirin was increased in nine of 13. Nearly all (8/9) found an increase in serum concentration of ribavirin. 50% of them had achieved the therapeutic level (2.2 microgram/ml) while four patients, in spite of increased serum concentration of ribavirin, did not reach therapeutic level. Totally, 11 of 20 (55%) reached 2.2 while nine of

20 (45%) less than 2.2. Decreased hemoglobin level was observed nearly in all patients. Mean: 2 g/dl (range: -0.1–5.6). In patients who reached therapeutic level of ribavirin decreased Hb level was more important (mean: 2.3 g/dl) than patients who did not achieved 2.2 microgram/ml (mean: 1.6 g/dl). We did not find any correlation between ribavirin serum concentration and early virologic response nor sustained virologic response.

Conclusion

Increased dose of ribavirin leads to increase serum concentration of ribavirin. Along with increased serum concentration of ribavirin, the rate of decreased hemoglobin level increases.