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Ferric Gluconate Yields Cost-Savings in Hemodialysis Patients with High Ferritin and Low TSAT: Results from the DRIVE Studies

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Abstract

The purpose of this analysis was to conduct a cost-effectiveness study in anemic hemodialysis (HD) patients with high serum ferritin (SF) and low transferrin saturation (TSAT) to determine if ferric gluconate (SFGC) and epoetin is more cost-effective than epoetin alone. A 6 week observational follow-up study to DRIVE was conducted to simulate the treatment group in DRIVE. Patients were prescribed set doses of epoetin, 25% greater than their pre-trial dosing. The intent to treat population included 64 participants in the SFGC and epoetin group, and 65 in the epoetin alone group. Treatment effectiveness was based on mean increase in hemoglobin (Hb) for each group (SFGC plus epoetin or epoetin alone) in the intention to treat population. Cost effectiveness was assessed from a Medicare payer perspective. The primary cost included the cost of epoetin and hospitalizations due to serious adverse events (SAEs) reported. The modified hospitalization costs (used 2005 Medicare reimbursement rates) were applied to each group with a discount of 3% per annum used to reflect the Medicare discount. The model was constructed to simulate the treatment groups in the DRIVE studies. This model used the perspective of a Medicare payer because that program bears a majority of the cost of HD patients. A cost effectiveness analysis was conducted utilizing a decision tree framework. Results of Decision Tree after Roll-Back Calculations

Results

- The cost per day was $3675 per g/dL increase in Hb
- 32.53% of the points are in the lower left hand portion of the graph, representing the treatment group that dominated the other group

Discussion

The modified hospitalization costs (used 2005 Medicare reimbursement rates) were applied to each group with a discount of 3% per annum used to reflect the Medicare discount. Though there is uncertainty surrounding any economic analysis, our findings suggest that ferric gluconate plus epoetin is highly efficacious in anemic hemodialysis patients with high serum ferritin and low transferrin saturation.

References

1. Alopaeus T, Kapoian T, O'Mara NB, Singh AK, Moran J, Rizkala AR, Geronmeus R, Kopelman RC, Dahl NV, Coyne DW. Application of our model to a population-level database is worthwhile to determine if ferric gluconate plus epoetin is more cost-effective than epoetin alone. The intent to treat population included 64 participants in the SFGC and epoetin group, and 65 in the epoetin alone group. Treatment effectiveness was based on mean increase in hemoglobin (Hb) for each group (SFGC plus epoetin or epoetin alone) in the intention to treat population. Cost effectiveness was assessed from a Medicare payer perspective. The primary cost included the cost of epoetin and hospitalizations due to serious adverse events (SAEs) reported. The modified hospitalization costs (used 2005 Medicare reimbursement rates) were applied to each group with a discount of 3% per annum used to reflect the Medicare discount. The model was constructed to simulate the treatment groups in the DRIVE studies. This model used the perspective of a Medicare payer because that program bears a majority of the cost of HD patients. A cost effectiveness analysis was conducted utilizing a decision tree framework. Results of Decision Tree after Roll-Back Calculations

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