Rifaximin treatment for encephalopathy reduces hospital resource use –real world data don't fail to IMPRESS

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The advent of rifaximin, a poorly absorbed antibiotic, for recurrent hepatic encephalopathy (HE), represents a major therapeutic advance for a debilitating condition, the treatment of which had remained unchanged for more than 30 years. The development of HE represents decompensation of end-stage liver disease, and is a marker of poor prognosis.[1] Recurrent HE significantly reduces health-related quality of life (HRQOL), and is an indication for liver transplantation. A seminal randomized placebo-controlled study which was published in 2010, demonstrated the efficacy of rifaximin in the secondary prevention of HE (60% reduction) as well as in the prevention of hospital admissions (50% reduction).[2]

Several studies have since replicated these findings, and shown that rifaximin is safe and effective for the prevention of recurrent HE, and improves HRQOL in combination with lactulose. Although clearly effective, concerns were raised in the UK regarding cost implications of rifaximin therapy, given an estimated 6-month treatment cost of £1689.65 per patient. This led to a detailed cost-effectiveness analysis by the National Institute for Health and Care Excellence (NICE), which culminated in the 2015 technology appraisal guidance and approval for rifaximin use in adult patients with recurrent HE.[3] A subsequent multicentre audit of 7 UK sites showed that rifaximin use was associated with a 31-53% reduction in total hospital length of stay, which afforded estimated annual mean savings of £1480–3228 per treated patient.[4]

The current study by Hudson and colleagues, entitled the 'IMPRESS' study, represents further retrospective analysis of the impact of rifaximin on hospital resource use, this time from 13 sites around the UK [5]. The purpose of the study was

to provide 'real world' data on the types and lengths of hospital admissions in patients who initiated rifaximin therapy for HE. While the study aimed to include 250 patients to power the study, 207 patients were identified over a 6-year period, of whom 145 had resource use data available. The patient cohort was typical of a 'real world' setting, with a good spread of disease severity as indicated by baseline MELD and Child-Pugh scores. Indeed, 6- and 12- month mortality rates were 19% and 27% respectively, and 97% of surviving patients had a hospital admission during the 24-month observation period. Rifaximin initiation was associated with a 19% reduction in HE episodes at 12 months (in both the overall and surviving patient sub-group). As expected, the authors found a significant beneficial impact of rifaximin on liver-related and all cause hospitalisations, hospital bed days, 30-day hospital readmissions and emergency department attendances when comparing 6-month data pre- and post- rifaximin commencement. Significant reductions in liver-related and all-cause critical care admissions at 6 and 12 months were evident in surviving patients.

The authors acknowledge several of the study limitations, including the retrospective nature and study design, the risk of commercial bias, and a failure to ascertain other factors, which could have influenced the outcomes identified. Nevertheless, the presented results serve to highlight the positive impact rifaximin use has had on the care of patients with decompensated end-stage liver disease, and the added potential cost-savings associated. Further long-term prospective studies are warranted to confirm these findings.

References

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