

Home-based infusion therapy for biological agent administration as a therapeutic option for patients with inflammatory bowel disease

M MADDEN, SSR PULUSU, I LAWRENCE

Centre for Inflammatory Bowel Disease, St John of God Hospital, Perth, Western Australia, Australia

Background and Aims: Chemo-at-Home is a privately owned, home-based infusion service that provides services for administering intravenous (IV) medications, including infliximab and vedolizumab for patients with inflammatory bowel disease (IBD). It was established in Western Australia, with a recent expansion to Adelaide, and is the only company of its kind. This study aims to assess the safety of Chemo-at-Home for infliximab and vedolizumab infusions in patients with IBD, the cost of delivery, and the level of patient satisfaction.

Methods: Patients with IBD receiving infliximab and vedolizumab were assessed. Safety was noted, with infusion reactions classified as minor, moderate, or severe and managed according to treatment protocols. The cost of infusion to health funds with Chemo-at-Home was compared with private hospital administration and the activity-based funding provided to public hospitals. A patient satisfaction questionnaire assessed overall experience, total infusion time, and attitudes towards safety and accessibility for patients receiving infusions from Chemo-at-Home or in hospital.

Results: This was a retrospective audit evaluating 162 infliximab infusions in 29 patients (19 patient-years of experience) and 155 vedolizumab infusions in 27 patients (16 patient-years of experience) with Chemo-at-Home from August 2014 to April 2017.

Safety: There were six acute infusion reactions with infliximab (3.7%) occurring in 4/29 patients. There was one moderate reaction (0.62%) managed by IV hydrocortisone and an antihistamine, which resulted in the infusion not being completed. Five were minor reactions (3.1%), and all of these infusions were completed. Three acute infusion reactions occurred with vedolizumab (1.9%), all of which were minor and all infusions were completed. There were no episodes of anaphylaxis, or episodes requiring the attendance of a doctor or the need for hospital transfer.

Cost: The cost of an infusion, regardless of medication, to the public hospital is funded at \$527 per infusion. The price charged to the commonest health funds (HBF, BUPA, MBP and AHSA funds) ranged from \$316 to \$1793 per infusion at the private hospital, and an uninsured patient is charged \$650 per infusion. The price agreed by Chemo-at-Home with the same health funds ranged from \$400 to \$726 per infusion.

Patient satisfaction: The patient questionnaire was distributed to 99 patients, 72 of whom responded (73%); 79% of Chemo-at-Home patients (30/38) and 69% of hospital patients (42/61) responded. Overall satisfaction was higher in the Chemo-at-Home group (median, 9.7 vs 8.9; $P = 0.0002$). Infusion time was significantly less in the Chemo-at-Home group for infliximab (median, 3.5 h vs 2 h; $P = 0.0017$) and vedolizumab (median, 3 h vs 1 h; $P < 0.0001$). Chemo-at-Home patients were also less likely to report issues with parking ($P < 0.0001$) and disruption to family life ($P = 0.0019$). Attitudes towards safety were not different between the groups.

Conclusion: Chemo-at-Home is a safe option for delivering IV infliximab and vedolizumab, with acute infusion reaction rates similar to previous studies. Cost is comparable to both public and private hospital administration, but Chemo-at-Home offers greater convenience and patient satisfaction to patients with IBD requiring long-term therapy.