



Impact of an Evidence-Based Guideline to Prevent Inappropriate Albumin Administration in a Tertiary Care Teaching Hospital in Yazd, Iran

Golnaz Afzal^{1*}, Danial Dehghani Firouzabadi², Reyhane Taati²,
Hossein Falahzadeh¹, Seyed Mojtaba Sohravardi¹, Amir Hossein Karimi²

¹Department of Clinical Pharmacy, School of Pharmacy, Shahid
Sadoughi University of Medical Science, Yazd, Iran

²Student Research Committee, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

OPEN ACCESS

*Corresponding Author:

Dept. of Clinical Pharmacy,
School of Pharmacy, Shahid
Sadoughi University of Medical
Science, Yazd, Iran

ABSTRACT

Introduction: Albumin is an expensive non-blood plasma substitute with limited availability, and its inappropriate use in healthcare settings has been reported. Hence, interventions are recommended to mitigate its misuse. This study aimed to compare the effectiveness of an evidence-based guideline designed to prevent inappropriate albumin administration at Shahid Sadoughi Hospital in Yazd, Iran.

Methods and Materials: In this prospective study, 382 patients were enrolled at Shahid Sadoughi Hospital in two phases. The patient's medical records were reviewed to gather demographic data, indication for albumin use, duration of albumin therapy, and appropriateness of albumin indication in the pre-intervention phase. In the post-intervention phase, albumin was administered following the American Society of Health-System Pharmacists (ASHP) guidelines. After the post-intervention period, demographic parameters, albumin indication, albumin therapy duration, and appropriateness of indication were compared among groups. The data were analyzed using SPSS 21 software and descriptive statistics.

Results: In this study, 382 patients were analyzed to investigate the consumption of albumin drugs before and after implementing guidelines. The gender distribution shifted from 51% male and 49% female to 61.1% male and 38.9% female, with significant differences. The percentage of patients with indications increased from 43.8% to 72.6%, showing a statistically significant difference. In the first phase, the average albumin level was 2.55 g/dL; in the second phase, it dropped to 2.2 g/dL. According to the Mann-Whitney test, this difference was significant. The average number of albumin vials consumed increased from 11 in the first phase to 14 in the second phase, which is also significant. The increase in vial consumption is attributed to a rise in indications. When controlling for indication in the regression model, the results showed a decrease of five units in vial consumption between the two phases.

Conclusion and Discussion: This study demonstrates that in the Shahid Sadoughi Hospital, albumin was prescribed inappropriately in most cases based on ASHP guidelines. Implementing the albumin prescription and administration guidelines in the hospital setting and clinical pharmacist intervention significantly reduces inappropriate albumin use and associated costs. Albumin prescriptions should be monitored carefully by clinical pharmacists.

Citation:

Afzal G, Dehghani Firouzabadi D, Taati R, Falahzadeh H, Sohravardi SM, Karimi AH. Impact of an Evidence-Based Guideline to Prevent Inappropriate Albumin Administration in a Tertiary Care Teaching Hospital in Yazd, Iran. *Iranian biomedical journal*. Supplementary (12-2024): 385.

Keywords: Albumins, Hospitals, Pharmacy

