ABSTRACT

**Antibiotic Stewardship in Acute Care**

Antibiotic resistance is a global threat to public health. The US Centers for Disease Control and Prevention (CDC) estimates that 2.5 million hospitalizations and 128,000 deaths per year in the US are caused by antibiotic-resistant organisms (1). However, even in communities that have not been extensively studied, many healthcare systems report significant challenges in antibiotic stewardship. Among the obstacles to overcome are the barriers to change and the lack of evidence for best practices. This study aimed to evaluate the impact of an antibiotic stewardship initiative on the antibiotic use in a complex care hospital.

METHODS

The study was a prospective before-and-after study conducted at a complex care hospital. The data were collected from August 2010 to July 2011. The intervention included the implementation of a multidisciplinary antibiotic stewardship program, which included the development of evidence-based guidelines, education and training, and monitoring and feedback. The outcome measures included the total number of days of antibiotic use, the number of non-perioperative antibiotic courses, and the number of antimicrobial classes prescribed.

RESULTS

The results showed a significant reduction in the total days of antibiotic use from 10,122 days in the baseline period to 5,761 days in the intervention period, a decrease of 43%. The number of non-perioperative antibiotic courses also decreased from 2,493 to 1,298, a decrease of 47%. The most common classes of antibiotics prescribed were cephalosporins, quinolones, and carbapenems.

CONCLUSION

The implementation of an antibiotic stewardship program in a complex care hospital resulted in a significant reduction in the total days of antibiotic use and the number of non-perioperative antibiotic courses. This study provides evidence for the effectiveness of antibiotic stewardship initiatives in complex care settings and supports the need for continued efforts in this area.

REFERENCES


