Ambulatory Cephalosporin Prescribing Practices at Children’s Hospital Colorado

Hai Nguyen-Tran, MD; Christine MacBrayne, PharmD, MScS, BCIDP; Sarah Parker, MD; Nicole Poole, MD, MPH

University of Colorado/Children's Hospital Colorado, CHCO Antimicrobial Stewardship Program

BACKGROUND

• Broad-spectrum cephalosporins:
  o Prescribed in children in ~16% of ambulatory antibiotic visits nationally
  o Rarely recommended as first-line therapy
• Cefdinir:
  o Broad-spectrum, third-generation cephalosporin
  o Commonly prescribed for penicillin allergic patients in various guidelines
  o Has poor pharmacokinetics (PK)
  o Unnecessary broad in several indications
• Study objective:
  o To determine the frequency and indications for broad-spectrum cephalosporins prescribed in ambulatory settings at Children’s Hospital Colorado (CHCO)

METHODS

• Study design:
  o Retrospective observational cohort
• Data source:
  o Electronic medical record chart review of broad-spectrum oral cephalosporins prescribed in CHCO ambulatory settings
• Inclusion/Exclusion criteria:
  o Encounters for patients ≤26 yr from CHCO ambulatory settings (excluding hematology/oncology) prescribed cefuroxime, cefprozil, cefpodoxime, cefixime, and/or cefdinir
  o Prescriptions Jan 1-Dec 31, 2019
  o Variables collected in REDCap database:
    o Age
    o Antibiotic prescribed
    o Indication for prescription
    o Location of prescription
    o Penicillin allergy
    o Recent antibiotic use within 30 days
    o Pertinent microbiology culture results
• Data analysis:
  o Descriptive statistical analysis

RESULTS

• 1381 encounters, mean age: 3 yr (range: 1 mo–26 yr)

Figure 1. Penicillin Allergy

Figure 2. Antibiotic Use in Preceding 30 Days

Figure 3. Broad-Spectrum Cephalosporin Prescriptions

Figure 4. Frequency of Indications for Prescriptions

Table 1. Otitis Media and Cephalosporin Prescriptions

Table 2. Culture Results

CONCLUSIONS

• Cefdinir is frequently prescribed in CHCO ambulatory settings, most frequently for OM

DISCLOSURES

None