6. OPPORTUNITIES FOR CLINICAL PHARMACIST INVOLVEMENT IN PERIOPERATIVE ANTIBIOTIC PROPHYLAXIS: MODERN RECOMMENDATIONS AND CLINICAL PRACTICE

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Introduction. Perioperative antibiotic prophylaxis is a key strategy to prevent postoperative infections. Appropriate antibiotic use before and during surgery significantly reduces the risk of infection, shortens hospital stay, and minimizes healthcare costs. The clinical pharmacist plays a crucial role in ensuring proper selection, dosing, timing, and duration of antibiotics in accordance with current guidelines and best practices.

Aim of study. This study aimed to evaluate the potential role of clinical pharmacists in perioperative antibiotic prophylaxis and assess current clinical practices regarding prophylactic antibiotic use in surgical procedures.

Methods and materials. The study retrospectively reviewed 100 patient records of surgical procedures performed between December 2025 and February 2026. Data were statistically analysed, including patient age, sex, body mass index, type of antibiotic prophylaxis, comorbidities, treatments, and surgery duration.

Results. A total of 100 patient records were reviewed, including 41 female and 59 male patients. Most were aged 55–80 years, with the remainder distributed across younger and older age groups. The majority weighed 80–120 kg. Patients were mainly treated in the neurosurgery department (22%), followed by general surgery (19%), trauma care (18%), orthopaedics (12%) and other departments. Surgeries were classified as clean (59%), clean-contaminated (21%), contaminated (4%), or dirty (16%). Antibiotic prophylaxis was indicated in 78% of cases, with the appropriate antibiotic selected in 73%. Common comorbidities included diabetes, hypertension, obesity, and anemia. Preoperative prophylaxis was administered to 81%, intraoperative to 26%, and postoperative to 32%, while 19% received no antibiotics. Cefazolin was the most commonly used agent (84.3%), occasionally combined with Metronidazole (15.7%). Appropriate dosing was achieved in 74% of patients. Surgical site infections occurred in 5% of cases. These results highlight that, while antibiotic prophylaxis is generally well implemented, there remain gaps in adherence to dosing and timing protocols.

Conclusions. The study demonstrated that preoperative antibiotic prophylaxis effectively prevents postoperative infections, with proper administration in the majority of cases (81%). Better adherence to timing and dosing protocols is needed to enhance patient safety further. Clinical pharmacists in managing antibiotic prophylaxis can contribute to optimising treatment regimens and improving overall healthcare quality.

Keywords. Antibiotic prophylaxis, clinical pharmacist, surgical infections.

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