整形外科における術後感染予防のための経口抗菌薬中止による手術部位感染発生率と医療費への影響
～病棟薬剤師による介入の重要性～

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Effects on surgical site infection rates and medical expenses of discontinuing oral antimicrobial prophylaxis for orthopedic surgery -Importance of ward pharmacist’s intervention-

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Several guidelines recommend that antimicrobial prophylaxis in surgery should be administered for a duration of less than 48 hours. However, in our facility oral antimicrobial prophylaxes were used after intravenous agents for orthopedic surgery and the duration of the administration was over 48 hours. Consequently, an orthopedic ward pharmacist recommended discontinuing oral antimicrobial agents. To support this intervention, we conducted a retrospective cohort study on patients who received total hip arthroplasty, total knee arthroplasty or micro fenestration to evaluate changes in rate of surgical site infection (SSI) and effects on medical expenses.

A total of 344 patients were enrolled as group one (before the intervention) and 343 patients as group two (after the intervention). Of these, 98 and 114 patients from each group respectively were analyzed. One patient (1.02%) was diagnosed with SSI in group one, and one (0.88%) was diagnosed with SSI in group two. The incidence of infection in the latter group was not inferior to that of the former group (difference -0.14%; 95% confidence interval -2.33 to 2.05%; \(P < 0.05\)). The rate of the administration of oral antimicrobial agents changed from 65.3% (64/98) to 2.6% (3/114) and was significantly lower in the latter group (\(P < 0.001\)). Furthermore, medical expenses were reduced from 134,401 yen to 12,046 yen. In conclusion, it is not recommended to administer prophylaxes for long periods, and the ward pharmacist contributed to appropriate administration of antimicrobial prophylaxis. This study reconfirmed that pharmacists should be present in wards.