The purpose of this study was to examine the recurrence rate of wound rupture in primary pilonidal sinus disease (PSD) after median closure. A total of 583 patients from the German military cohort were interviewed. We compared the choice of surgical therapy, wound dehiscence (if present) and long-term recurrence-free survival for patients with primary open treatment, marsupialization and primary median treatment (closed vs. secondary open, respectively). Actuarial recurrence rate was determined using the Kaplan-Meier calculation with a follow-up of up to 20 years after primary PSD surgery. Patients with excision followed by primary open wound treatment showed a significantly lower 5- than 10-year recurrence rate (8.3 vs. 11.2%) compared to the patients with primary midline closure (17.4 vs. 20.5%, p = 0.03). The 20-year recurrence rate was 28% in primary open wound treatment versus 44% in primary midline closure without wound rupture. In contrast to these findings, long-term recurrence rates following secondary open wound treatment (12.2% at 5 years vs. 17.1% at 10 years) tended to be higher (although not significantly, p = 0.57) compared to primary open treatment (8.3% at 5 years vs. 11.2% at 10 years). There was no statistical difference in long-term recurrence rates between secondary open and primary midline closure (p = 0.7). Hence, despite only a short wound
closure time experienced before wound rupture, the patient does not fully benefit from an open wound treatment in terms of recurrence rate. The postoperative pilonidal sinus wound rupture of primary midline closures did not significantly increase the 5- and 10-year long-term recurrence rates compared to uneventfully healing primary midline closures.