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**Poster Session V**

**Infections in immunocompromised patients**

**INFECTIONS AFTER COLORECTAL CANCER SURGERY AND THE PATIENT SURVIVAL**

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**Objectives:** Colorectal cancer surgery procedures are associated with a high incidence of postoperative infectious complications. The most frequent are surgical site infections. Infections cause high morbidity, prolong hospitalization and may also be connected with short and long term postoperative survival. Interleukins IL6 and IL8 are growth factors for colorectal carcinoma. The cytokine release is caused by surgery, infections and blood transfusion. High interleukin levels in the peritoneal fluid after surgery may provide a milieu conducive to local infection and recurrence of the malignancy. We have analysed a group of patients with colorectal carcinoma surgery, postoperative infection complications and long term survival.

**Methods:** The study was retrospective. We followed patients with colorectal carcinoma who had elective surgery in our centre over a 28-month period from September 2006 to December 2008. We recorded postoperative infections in 30 days, including surgical site infections, pneumonia, urinary tract infections, central venous catheter infections and sepsis. We used definitions of infections by Centers for disease control and prevention. We followed their survival after one and after four years.

Logistic regression analysis was used to predict the probability of infection. The survival analysis was performed using the Kaplan-Meier method and differences among the patient groups were tested by the log-rank test. Prognostic factors were investigated by univariate and multivariate Cox proportional hazard model. The p-values under 0.05 (two-sided) were considered statistically significant.

**Results:** 189 patients were included in our study. 110 were male and 79 female. The average age was 64.8 years (34 to 87 years). 116 patients had rectum resection, 64 colon and 9 recurrent cancer resection. 113 patients were treated with either radiotherapy or chemotherapy prior to surgery. 56 patients (29.6%) developed an infectious complication. 44 patients had surgical site infection (23.2%). Intraoperative blood loss was an important risk factor for infection in univariate analysis ( $p=0.02$ ) and in multiple logistic regression ( $p=0.037$ , OR 2.13, 95% CI 1.05-4.32). One-year survival of the whole group was 93% and the four-year one 68%. Four-year survival was significantly higher in the group without infection (73.9%) as compared to the group with infection (54.0%). P value in log-rank test was 0.002. Multivariate analysis showed that postoperative infection was an independent factor associated with a worse survival ( $p=0.005$ , HR 2.27, 95% CI 1.28-4.01). Age, number of metastatic nodes and preoperative carcinoembryonic antigen value were also significantly associated with four-year survival, while the intraoperative transfusion ( $p=0.184$ ) was not.

**Conclusions:** Postoperative infections after colorectal carcinoma surgery not only affect the short term results of treatment, but also the long term oncologic outcomes. The aim is to reduce the risk factors for infections as much as possible.