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## **Periodontal Pockets as a Risk Factor for Cytomegalovirus Infection after Kidney Transplantation: Single-center Retrospective Analysis**

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### **Introduction:**

Periodontal pockets are known to be a source of cytomegalovirus (CMV). CMV infection has been identified as a risk factor for acute kidney allograft rejection and even long-term mortality in organ transplant recipients. This study aims to investigate whether periodontal pockets may be a risk for CMV infection after kidney transplantation.

**Methods:** We conducted a retrospective analysis of 98 patients who underwent living donor kidney transplantation and received preoperative oral care at our institution. The extent of periodontal pockets was assessed as the percentage of tooth sites with probing pocket depth 4mm (%PPD). We assessed the cumulative incidence of CMV infection within 3 months after transplantation.

### **Results:**

Cox hazard regression analysis showed that %PPD was a significant risk factor for CMV infection within 3 months after transplantation (hazard ratio =29.0; 95% confidence interval, 2.2–252.0;  $p=0.004$ ). The receiver operating characteristic curve determined the cutoff value for %PPD to be 26.7%. The cumulative incidence of CMV infection within 3 months after transplantation was significantly higher in patients with %PPD >26.7% compared to patients with %PPD ≤26.7% (27.8% vs. 7.6%,  $p = 0.011$ ).

### **Conclusion:**

Our study indicates that periodontal pockets may be a risk for CMV infection after kidney transplantation.