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**Title:** Bacterial infections and colonization in patients with tracheobronchial stenting

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**Body:** Traheobronchial stenting (TBS) is a major therapeutic interventional procedure in obstructive lesions of central airways. Among the most common complications of TBS are retention of secretions (RS) and infections, but few studies pay attention to the microbiological constellations associated with stenting. Patients and methods: In this prospective clinical observation we examine the microbiological samples of tracheal/traheobronchial lavage (T/TBL) before and 4 weeks after placement of silicone stents in 14 patients with benign traheobronchial stenosis. The pathogenetic role of the isolated bacteria was determined by correlation of culture results and clinical signs of infection. Results: T/TBL are associated with presence and degree of RS. In five of 14 patients colonization of airways is present before TBS; in three of them we identified potentially pathogenic microorganisms. After TBS, bacterial colonization was observed in 11 (7 of them without prior colonization) of 14 patients. In 6 of them we have established one or more potentially pathogenic bacteria (*Pseudomonas aeruginosa* [4], *Staphylococcus aureus* [3], *Streptococcus pneumoniae* [1], *Klebsiella* spp. [1]). Although TBS is likely related to the RS, no statistical significance has been established (Fisher test,  $p = 0.06$ ). Discussion: We assume that TBS is a prerequisite for bacterial colonization and RS, caused by potentially pathogenic microorganisms. This is confirmed with absence of airway colonization before TBS in most patients in the study group. In our observation, however, bacterial colonization is not manifested by clinical signs of infection. Colonization is associated with RS in stent wall.