

## Prevalence of Staphylococcus and Candida Species in the Oral Cavities of the Patients with Cleft Lip and Palate (CLP) Prior to Reconstructive Surgery

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Cleft lip and palate (CLP) is a developmental anomaly that requires surgical correction during early childhood. Staphylococcus and Candida species are common oral commensals that may turn into opportunistic pathogens in CLP patients. This study aimed to investigate the oral prevalence of *Staphylococcus* and *Candida* species in a group of patients with CLP prior to reconstructive surgery. Demographic data were collected using an interviewer-administered questionnaire from 52 CLP patients attending the oral and maxillofacial surgery clinic in the Faculty of Dental Sciences after obtaining the informed assents. Oral swabs were collected for microbiological investigations pre-operatively and cultured on blood and Sabourauds dextrose agar to isolate Staphylococcus and Candida species, respectively. Gram staining, catalase and coagulase test, germ tube test, and chrome agar were used to identify Staphylococcus and Candida species. Antibiotic sensitivity testing (ABST) for Staphylococcus species was performed using the disk diffusion method. The oral prevalence of Staphylococcus species was 34/52 (65.4%) and Candida species 12/52 (23.1%). Staphylococcus species consisted of *S. aureus* 14/34 (41.2%) and Coagulase Negative Staphylococcus (CoNS) 20/34 (58.8%). There were eight methicillin-resistant *S. aureus* (MRSA) and 11 methicillin-resistant CoNS isolates. Candida species (12) included 7/12 *C. albicans* and 5/12 non-*C. albicans* Candida. This study indicates that nearly 2/3 of CLP patients in this sample had oral Staphylococcus species. Therefore, it is important to assess the oral prevalence of Staphylococci and their antibiotic sensitivity patterns and to improve the oral hygiene of CLP patients pre-operatively to avoid opportunistic infections following reconstructive surgery.

**Keywords:** ABST, candida, cleft lip and palate, staphylococcus, MRSA