

Molecular typing and detection of collagen binding genes among *Streptococcus mutans* isolated from diabetic and non-diabetic individuals from Northern Jordan

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Abstract: *Streptococcus mutans*, a cause of dental caries, is an opportunistic pathogen leading to subacute infective endocarditis and bacteremia. Bacterial attachment to heart valves, requires the presence of collagen-binding proteins (CBP), such as Cnm and Cbm; encoded by *cnm* and *cbm* genes, respectively. Herein, the prevalent *S. mutans* serotypes and genes for CBPs among diabetics and non-diabetic controls from Northern Jordan, were investigated. Tooth swabs were cultured on TYCSB agar for *S. mutans* isolation. PCR was used to confirm isolates' identity, and to identify isolates' serotypes and CBP genes. The most prevalent serotype among the diabetics was c (71.6%), followed by k (43.2%), f (32.1%), and e (13.6%). Among the diabetics, 44.4% harbored 2 or more serotypes. The most prevalent serotype among the non-diabetics was k (92.1%), followed by c (69.8%), f (25.4%), and e (15.9%). Among the non-diabetics, 92.1% harbored 2 or more serotypes. The prevalence rates for *cnm* and *cbm* were 75.3% and 11.1%, respectively, among the diabetics' isolates, and 38.1% each, among the non-diabetics' isolates. Due to high prevalence of serotype k and isolates harboring CBP genes, the Jordanian population maybe at risk for developing *S. mutans*-related complications, such as infective endocarditis.