

## Circulating blood is frequently exposed to periodontal bacteria

Noritsugu Shiono, Takeshirou Fujii, Tomoyuki Katayanagi, Tsukasa Ozawa, Muneyasu Kawasaki, Akihisa Horie, Hideki Sekiya and Yoshinori Watanabe

Toho University, Japan

There is considerable interest in the infectious mechanism of periodontopathic bacteria in the occurrence of cardiovascular disorder. We investigated the detection of periodontopathic bacteria in blood and vegetation among surgical repair cases of endocarditis. From 2003 April to 2010 December, 31 endocarditis patients were performed surgical repair. As for periodontopathic bacteria, Streptococcus, Candida, Prevotella, and Staphylococcus were detected. In blood, Streptococcus, Staphylococcus and Enterococcus were detected. In microscopic finding of cardiac tissue, GPC+ was detected in 8 samples. GPR+ was detected in 1 sample. In specimen culture, Staphylococcus, Streptococcus and Nisseria were detected. The prevalence rate of the pathological condition in the mouth was 81% (25/31). Four cases, periodontopathic bacteria identified the same bacteria in the blood culture. Ten cases, the bacteria in the cardiac tissue or vegetation was identified the same bacteria in the blood. It was suspected that the periodontopathic bacteria in the mouth shifted into the blood stream and caused bacteremia. In three cases, the bacteria of the cardiac tissue were different from the blood culture. There were two cases that two different species of bacteria were detected in the same cardiac tissue samples. The disagreement of bacteria between blood cultures to tissue culture was considered to empiric antibiotic medical treatment before operation. Circulatory blood seems to be exposed to some bacteria frequently; this scenario can explain easily the bacterial changing.

### Biography

Noritsugu Shiono has completed his Ph.D. at Toho University (Japan) and postdoctoral studies from Toronto University (Canada). He is Associate Professor of Department of Cardiovascular Surgery, Toho University.

[shiono@med.toho-u.ac.jp](mailto:shiono@med.toho-u.ac.jp)