

## Relationship between streptococcal infective endocarditis and pre-neoplastic colorectal lesions

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**Background:** Colorectal cancer is associated with infective endocarditis (IE), due to specific gut pathogens like streptococcus Gallolyticus that use the tumor presence as a point of blood entry. However, the association between streptococcal IE and pre-cancerous lesions such as dysplastic adenomas is unknown.

**Objectives:** To determine the association with pre-neoplastic colorectal lesions and streptococcal IE.

**Methods:** Two hundred eighty consecutive patients with IE were included retrospectively in a protocol of clinical, microbiological and imaging follow-up, between January 2008 and December 2018. Pre-cancerous lesions were divided as high and low-grade dysplasia based on World Health Organization criteria. Colorectal cancer was defined as the presence of malignant cell beyond the muscularis mucosa.

**Results:** Fifty patients (18%) presented neoplastic or pre-neoplastic lesions, and 26 of them (52%) were colorectal: 10 (38%) colorectal cancer and 16 (62%) precancerous lesions (12% high degree (n=2); 88% low degree (n=14)). Both, colorectal cancer (20% vs 5%;  $p=0.03$ ) and pre-neoplastic lesions (44% vs 3%;  $p<0.05$ ) were associated with higher incidence of streptococcus Gallolyticus IE (Figure 1). Additionally, 42% (n=11) of colorectal lesions were diagnosed in the IE event. No significant differences were found about cardiac surgery and in-hospital mortality in these patients.

**Conclusions:** Pre-cancerous colorectal lesions are also associated with streptococcus Gallolyticus IE, even low-grade lesions. Hence, it is necessary to rule out occult neoplastic and also pre-neoplastic colorectal lesions with colonoscopy in these patients.

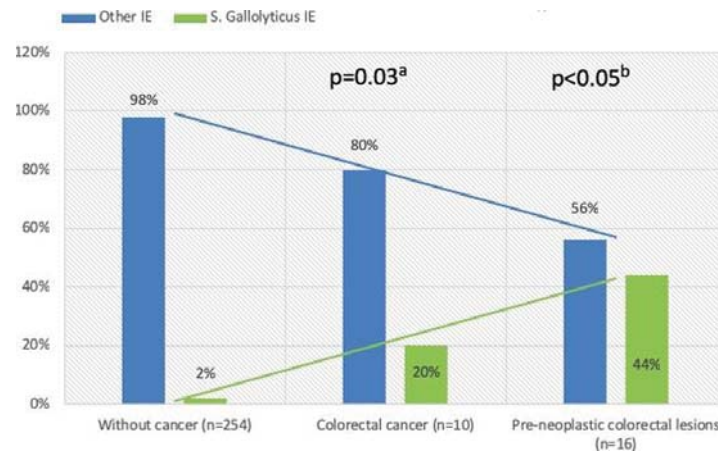


Figure 1. Relationship between S. Gallolyticus IE and colorectal lesions. (a) Statistical significance between colorectal cancer and S. Gallolyticus IE. (b) Statistical significance between pre-neoplastic colorectal lesions and S. Gallolyticus IE.