

# *Streptococcus gallolyticus* endocarditis— an uncommon but serious complication of constipation management

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*To the Editor*—I deeply appreciate the timely publication of the Consensus Statement on Chronic Idiopathic Constipation in the current issue of the *Hong Kong Medical Journal* (April 2019).<sup>1</sup> It addressed many important issues, including advising caution on the popular use of fibre-rich supplements and lactulose. These compounds are indigestible for humans and serve as osmotic bulk expanders to facilitate faecal transit and expulsion. They are fermented by intestinal bacteria, often but not always favouring beneficial bacteria such as bifidobacteria over unfavourable bacteria such as clostridia and bacteroides. For decades, health food advocates focused on their value and seldom cautioned against any risks.<sup>2</sup> However, the survival advantage might change, and allow opportunistic pathogens to thrive.<sup>3</sup> *Streptococcus gallolyticus* is an example of such an opportunist. First, it is capable of digesting a wide range of plant cellulose and disaccharides, including lactulose. Second, it creates a highly acidic local environment deleterious to many other organisms but not to itself, having developed various pathways to survive such acidity. Third, it attains virulence with Pil-3 and other molecules, which enable it to infect intestinal mucosal cells, to evade host innate immunity, and to enter the bloodstream, whereupon it readily attaches to collagen-rich tissues such as heart valves resulting in endocarditis.<sup>4</sup> For a patient with chronic constipation, the long-term intake of a high-fibre diet and lactulose has been found associated with *Streptococcus gallolyticus* endocarditis.<sup>5</sup>

## Author contributions

The author had full access to the data, contributed to the

study, approved the final version for publication, and take responsibility for its accuracy and integrity.

## Conflicts of interest

The author has no conflicts of interest to disclose

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