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Sexually Transmitted Infections Press Release

Commercial brand of mouthwash can help kill off gonorrhoea in the mouth

Daily use might be cheap and easy way of curbing spread of infection, say researchers

A commercial brand of mouthwash that is readily available from supermarkets and pharmacies can help curb the growth of the bacteria responsible for gonorrhoea, reveals preliminary research published online in the journal **Sexually Transmitted Infections**.

Daily rinsing and gargling with the product might be a cheap and easy way of helping to control the spread of the infection, suggest the researchers.

New cases of gonorrhoea among men are on the rise in many countries amid declining condom use, with the bulk of cases among gay/bisexual men, say the researchers.

Rising rates of gonorrhoea heighten the risk of the emergence of antibiotic resistant strains of *Neisseria gonorrhoeae*, the bacteria responsible for the infection, making the need for a preventive measure that doesn't rely on condoms even more urgent, they say.

As far back as 1879, and before the advent of antibiotics, the manufacturer of Listerine, a commercial brand of mouthwash, claimed that it could be used to cure gonorrhoea. But no published research has tested out this claim.

In a bid to rectify this, the researchers assessed whether Listerine could curb the growth of *N gonorrhoeae* in laboratory tests and in sexually active gay/bisexual men in a clinical trial.

For the laboratory tests, different dilutions (up to 1:32) of Listerine Cool Mint and Total Care, both of which contain 21.6% alcohol, were applied to cultures of *N gonorrhoeae* to see which of any of them might curb growth of the bacteria. By way of a comparison, a salt water (saline) solution was similarly applied to an identical set of cultures.

Listerine at dilutions of up to 1 in 4, applied for 1 minute, significantly reduced the number of *N gonorrhoeae* on the culture plates, whereas the saline solution did not.

The clinical trial involved 196 gay/bisexual men who had previously tested positive for gonorrhoea in their mouths/throat, and who were returning for treatment at one sexual health clinic in Melbourne, Australia, between May 2015 and February 2016.

Almost a third (30%; 58) tested positive for the bacteria in their throat on the return visit.

Thirty three of these men were randomly assigned to a rinse and gargle with Listerine and 25 of them to a rinse and gargle with the saline solution.

After rinsing and gargling for 1 minute, the proportion of viable gonorrhoea in the throat was 52% among the men using Listerine compared with 84% among those using saline.

And the men using Listerine were 80% less likely to test positive for gonorrhoea in their throat five minutes after gargling than were the men using the saline solution.

The researchers admit that the monitoring period was short, so the possibility that the effects of the mouthwash might be short-lived can't be ruled out. But the laboratory test results would suggest otherwise, they say.

This research is preliminary, so a larger trial is currently under way to confirm these results and see whether the use of mouthwash could curb the spread of gonorrhoea, they say.

“If daily use of mouthwash was shown to reduce the duration of untreated infection and/or reduce the probability of acquisition of *N gonorrhoeae*, then this readily available, condom-less, and low cost intervention may have very significant public health implications in the control of gonorrhoea in [men who have sex with men],” write the researchers.

[Ends]

Notes for editors

Research: Antiseptic mouthwash against pharyngeal *Neisseria gonorrhoeae*: a randomised controlled trial and an in vitro study
<http://sti.bmj.com/lookup/doi/10.1136/sextrans-2016-052753>

About the journal

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