Does the use of triclosan-coated sutures really reduce surgical site infection after open vein bypass grafting patients?

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We read with interest Thimour-Bergström et al.’s recent article [1] on the randomized trial evaluating the effect of triclosan-coated sutures on the rate of surgical site infection (SSI) after open vein bypass grafting procedures. The authors’ report that leg-wound closure with triclosan-coated sutures reduces the SSI rate in coronary artery bypass surgery (CABG) patients after open vein harvesting.

The study was double-blinded. The antibiotic prophylaxis and surgical wound methods were standardized. All wounds were inspected by a specially trained research nurse at 4 and 30 days after surgery and evaluated according to the Centre for Disease Control (CDC) definition of SSI [2]. On the 60th postoperative day the patients were interviewed by telephone and, if a patient reported any type of wound-healing problems, they were seen at the outpatient clinic.

The incidence of SSI on the 30th and the 60th postoperative days was 9 and 12.5% in the triclosan-coated suture group and 13 and 20% in the control group, respectively.

Their study has some limitations that make us unable to agree with the conclusion that triclosan-coated sutures reduce the risk of SSI after vein harvesting in CABG patients.

First, the diagnosis of SSI according to the CDC definition should be made within 30 days of surgery. In this study, the difference in the incidence of SSI on the 30th postoperative day was only 4%. However, Thimour-Bergström et al. reported the diagnoses that were made on the 60th postoperative day. Furthermore, the primary diagnosis of SSI on the 60th postoperative day was made by a patient, not by a surgeon.

Secondly, the authors reported the result of univariate analysis only. The number of bypasses was 3.0 in the triclosan group and 3.2 in the control group, \( P = 0.008 \). Furthermore, the number of bypasses was 3.4 among patients who developed leg infection and 3.1 among patients who did not develop leg infection \( P = 0.014 \). It is possible that the number of bypasses (because of the longer graft and operation time required) would have been an independent risk factor for infection rather than use of non-triclosan suture if the multivariate analysis were performed.

Thirdly, the study was financially supported by Ethicon, Inc., Somerville, NJ, USA, the company providing triclosan-coated sutures.

Thimour-Bergström et al. have conducted a finely designed study. However, the results of the 30th postoperative day should have been reported and a multivariate analysis of risk factors should have been performed. Appropriate analysis might have led to a conclusion that the use of triclosan-coated sutures does not reduce the risk of wound infection rate in CABG patients after open vein harvesting.

REFERENCES
