

Simpler and cheaper antibiotic prophylaxis with insertion of nutrition catheter in the stomach

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Researchers at Karolinska Institutet recommends a new routine for protection against infection when percutaneous endoscopic gastrostomy (PEG), a tube for feeding directly through the abdominal wall, is surgically inserted in the stomach. The new routine is both simpler and cheaper than the one used today. The method, presented in the *British Medical Journal*, has been clinically tested on over 200 patients at the Karolinska University Hospital in Solna, Stockholm County, Sweden.

PEG is typically used for patients unable to swallow and eat in the usual way, and used when improvement in the short term is not expected, for example, in case the patient has [throat cancer](#), esophagus cancer or got a stroke. In Sweden there are several thousand PEG operations per year, and surgery is increasing. One problem with surgery is that the risk of [infection](#) is high, which at worst can lead to death. To reduce the risk of infection, cefuroxime, a type of liquid antibiotics for use directly in the [blood stream](#) is given today, one hour before surgery.

"It is always difficult for the operating doctor to know whether the infection preventive treatment has been given on time, which could stop the whole operation process", says Dr John Blomberg, PhD Student at Karolinska Institutet and Senior Physician at Karolinska University Hospital.

"In some cases, it is impossible to insert a PEG and then the antibiotics

have been given unnecessarily. When a PEG operation fails, which occurs in every ten cases, it usually depends on how the [internal organs](#) are located in relation to the abdominal wall and stomach", Dr Blomberg continues.

With the new method for protection against infection, which he and his colleagues present in the scientific journal BMJ, the patient is instead given different [antibiotic drugs](#), a combination of sulfamethoxazole and trimethoprim, as a direct solution in PEG-catheter after surgery is completed. This routine in combination with a lighter workload and a smaller drug cost for hospitals makes this new procedure reduce the cost for PEG operations considerably.

The present study has been done on 234 patients between 2005 and 2009, half of whom were treated with cefuroxime and the other half treated with the mixture of sulfamethoxazole and trimethoprim. Of these 14 patients treated with cefuroxime and 10 patients treated with the mixture of sulfamethoxazole and trimethoprim got an infection. Therefore there are several reasons to recommend this new way of giving [antibiotics](#) at PEG operations.

"Both methods give equivalent results in terms of reduced risk of infection for the patient. But the new method is much simpler, and at least ten times cheaper", says Dr Blomberg.

More information: Blomberg J., Lagergren P., Martin L., Mattsson F., Lagergren J. "Novel approach to antibiotic prophylaxis in percutaneous endoscopic gastrostomy (PEG): randomised controlled trial" British Medical Journal, 2 July 2010, [doi:10.1136/bmj.c3115](https://doi.org/10.1136/bmj.c3115)

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