

Severe infections with hospitalization after prostate biopsy rising in Sweden

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Transrectal ultrasound guided biopsy is the gold standard for detecting prostate cancer, but international reports have suggested that the number of risks associated with the procedure is increasing. In a new nationwide population-based study, Swedish researchers found that six percent of men filled a prescription for antibiotics for a urinary tract infection within 30 days after having a prostate biopsy, with a twofold increase in hospital admissions over five years, reports *The Journal of Urology*.

Earlier studies reported serious adverse events after [prostate biopsy](#) including febrile [urinary tract infection](#) and urosepsis in one to four percent of [men](#), despite the use of prophylactic antibiotics. There have also been reports that chronic conditions such as diabetes, benign prostatic hyperplasia (BPH), and a history of urinary tract infection increase the risk of infections.

To estimate the incidence of infection after prostate biopsy and assess risk factors for infection and 90-day mortality in Sweden, researchers looked at records of more than 51,000 men registered in the Swedish Prostate Cancer database who underwent transrectal ultrasound guided prostate biopsy between 2006 and 2011. They also compiled data from the National Prostate Cancer Register (NPCR) of Sweden, which captures more than 96 percent of all newly diagnosed prostate cancers in the country.

"We aimed to estimate the frequency and severity of infectious complications in men diagnosed with [prostate cancer](#) after prostate

biopsy by examining how many men filled prescriptions for antibiotics related to urinary tract infections, rates of hospitalization within 30 days, and death due to infection," says lead investigator Karl-Johan Lundström, MD, Department of Surgical and Perioperative Sciences, Urology, Andrology, Umeå University, Östersund, Sweden. "We also capitalized upon the unique nationwide cross-linked health care databases in Sweden to perform a more comprehensive evaluation of potential risk factors for infectious complications," he adds.

Of the men who filled a prescription for urinary tract antibiotics within 30 days of biopsy, 54 percent filled the prescription in the first week after biopsy. One percent of men were hospitalized with a urinary tract infection.

Between 2006 and 2011 the number of men obtaining an antibiotic prescription after biopsy decreased, whereas the number who were hospitalized increased. No significant increase in 90-day mortality was observed, however.

The strongest [risk factors](#) for an antibiotic prescription were multiple comorbidities, particularly diabetes, and prior infection. Overall, approximately two percent of the men had a urinary tract infection during the six months before biopsy.

"Our data show that severe infections with hospitalization after prostate biopsy are increasing in Sweden. The rate of hospital admission increased twofold during this five-year period. However, the risk of dying of an infection after prostate biopsy is very low," observes Dr. Lundström. "The risk of post-biopsy infection is highest among men with a history of [urinary tract infections](#) and those with significant comorbidities. The increasing risk of hospitalization is concerning and highlights the importance of carefully evaluating the indications for biopsy especially in men at increased risk of infection," he concludes.

More information: "Nationwide population-based study of infections after transrectal ultrasound guided prostate biopsy," by Karl-Johan Lundström, MD, Linda Drevin, Stefan Carlsson, PhD, Hans Garmo, PhD, Stacy Loeb, MD, Pär Stattin, PhD, and Anna Bill-Axelsson, PhD. DOI: [dx.doi.org/10.1016/j.juro.2014.04.098](https://doi.org/10.1016/j.juro.2014.04.098). The *Journal of Urology*, published online in advance of Volume 192, Issue 4 (October 2014)

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