# **Erectile Dysfunction in clinical practice**

- With special focus on the correlation to myocardial infarction, lower urinary tract symptoms (LUTS), treatment cost and optimization –

## Akademisk avhandling

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This thesis is based on the following papers:

- I. Ströberg P, Frick E, Hedelin H. Is erectile dysfunction really a clinically useful predictor of cardiovascular disease?

  Scandinavian Journal of Urology and Nephrology 2005;39:62-65.
- II. Ströberg P, Boman H, Gellerstedt M, Hedelin H. Relationships between lower urinary tract symptoms, the bother they induce and erectile dysfunction. *Scandinavian Journal of Urology and Nephrology 2006;40:1-6.*
- III. Ströberg P, Bergström A, Hedelin H. Is sex only for the healthy and wealthy? *Journal of Sexual Medicine 2006; [on line early publication] (accepted Dec 2005).*
- IV. Ströberg P, Hedelin H, Ljunggren C. Prescribing all PDE-5 inhibitors to a patient with Erectile Dysfunction (ED), a realistic and feasible option in everyday clinical practice -Outcomes of a simple treatment regime-*European Urology 2006 Mar 9; [Epub ahead of print] (accepted Jan 2006).*



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#### **Abstract**

The purpose of this thesis was to study and evaluate aspects of Erectile Dysfunction (ED) in clinical practice, with special focus on the correlation to myocardial infarction, LUTS (lower urinary tract symptoms), ED treatment costs and optimization.

A group of 100 patients under the age of 70 years who had suffered their first MI and an age matched control group without MI answered a questionnaire regarding ED and concomitant diseases. The aim was to evaluate the possible connection between ED and cardiovascular disease (CVD) in a more severe manifestation, myocardial infarction (MI) and if ED is a clinically useful predictor for MI.

A survey consisting of two questionnaires, IPSS (reflecting LUTS and the bother it causes) and IIEF-5 (reflecting ED) was sent to 2000 randomly selected men, 60-70 years old. The aim was to study the relationships between lower urinary tract symptoms (LUTS), the bother induced by LUTS, age and ED. The importance of the relationship between LUTS and ED for the care of the individual patient in clinical routine was given special attention.

A questionnaire was mailed to 132 men with ED, who 2 years earlier, when the drug was subsidised, had started Sildenafil (a selective PDE-5 inhibitor) treatment. The questionnaire, which was sent out when the subsidisation had been withdrawn, included questions regarding current ED treatment, frequency of Sildenafil use, reasons for change or discontinuation, effect of the treatment, partner relations and total income of the household. The aim was to study the compliance for ED treatment with Sildenafil in clinical practice, with special focus on the association betwen cost and consumption.

In a forth study outcomes of a treatment regime, where 186 eligible patients in clinical practice had the opportunity to try the three different PDE-5 inhibitors, were evaluated.

An association between CVD and ED was found, but ED as a single symptom does according to our judgment not justify an investigation of risk factors for coronary artery disease. If ED is to be a clinically useful predictor, it must also be a reason to seek medical attention, which rarely was the case. There was a correlation between LUTS (c.c. 0.3 p >0.001), the bother induced by LUTS (c.c. 0.3 p >0.001), age and ED. The relationships were as in other studies rather weak and consequently appear to be of less importance for the management of the individual patient seeking medical attention due to LUTS and/or ED. The treatment compliance for Sildenafil in clinical practice was just under 50% two years after treatment initiation. Cost appeared to be an important factor for both treatment abortion and rationing. A treatment regime that allows the patients to try out the three available PDE-5 inhibitors, at the highest recommended dose, is a feasible option in clinical practice which will lead to a exceptionally high response rate (89%) in both previously PDE-5 treated and naïve patients. More long acting drugs was not preferred more often and a fast acting effect was a factor of little importance for patient preference.

Key words: Erectile Dysfunction, Cardiovascular disease, LUTS, Cost, Treatment optimization, Preference, Clinical practice.