

Long-term follow-up of adult women with urinary tract infection in childhood

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av

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- I. Gebäck C, Hansson S, Martinell J, Sandberg T, Jodal U.
Urinary tract infection pattern in adult women followed from
childhood. *Submitted*.
- II. Gebäck C, Hansson S, Himmelmann A, Sandberg T, Sixt R, Jodal U.
Twenty-four-hour ambulatory blood pressure in adult women with
urinary tract infection in childhood. *J Hypertens 2014; 32:1658-1664*.
- III. Gebäck C, Hansson S, Martinell J, Sandberg T, Sixt R, Jodal U.
Renal function in adult women with urinary tract infection in
childhood. *Pediatr Nephrol 2015; 30:1493-1499*.
- IV. Gebäck C, Hansson S, Martinell J, Milsom I, Sandberg T, Jodal U.
Obstetrical outcome in women with urinary tract infections in
childhood. *Submitted*.



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Long-term follow-up of adult women with urinary tract infection in childhood

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Acute pyelonephritis is common in young children and can lead to permanent renal damage. Renal damage increases the risk of complications such as hypertension and decreased renal function later in life. For women with renal damage there is also an increased risk of pregnancy complications. During the years 1982 to 1984 a long-term follow-up study was performed in women who had had urinary tract infections (UTI) in childhood. The material consisted of 111 women, born between 1950 and 1968, 54 with known renal damage detected by urography and 57 with proneness to UTI but without renal damage.

During the years 2001 to 2004, 86 of these patients were reinvestigated. The aim of the new study was to evaluate 1) if the patients with renal damage had an increased prevalence of hypertension; 2) if renal function, as measured by the glomerular filtration rate (GFR), had deteriorated since the last study; 3) if the pattern of UTI had changed with increasing age; 4) if patients with renal damage had higher prevalence of gestational hypertension, preeclampsia or other complications during their pregnancies.

Each patient was interviewed according to a structured questionnaire concerning UTI and was investigated with DMSA scan, EDTA clearance, office blood pressure, and 24-hour ambulatory blood pressure monitoring. Hospital and antenatal clinic records were also studied.

The results showed that women with bilateral or severe unilateral renal damage had higher blood pressure than those without damage. Women with bilateral damage had significantly lower GFR than those with unilateral or no damage. Decrease of GFR since the previous study was seen only in the group with bilateral damage. The proneness to febrile UTI decreased with age. Women with renal damage had significantly higher blood pressure during pregnancy but no increased frequency of other pregnancy complications.

Women with bilateral or severe unilateral renal damage associated with UTI in childhood have an increased risk of high blood pressure and decreased renal function in adult age. Follow-up of blood pressure and renal function should be considered in these women. Extra monitoring of blood pressure during pregnancy is also recommended.

Keywords: ambulatory blood pressure, blood pressure, chronic kidney disease, DMSA scan, glomerular filtration rate, hypertension, pregnancy, renal damage, renal function, urinary tract infection, vesicoureteral reflux

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