Eradication of multi-resistant *Escherichia coli* from a patient with urinary tract infection using specific autovaccination therapy

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Objective: Treatment of urinary tract infections (UTI) in humans are often hampered by multi-resistant bacteria or, however, by micro-organisms which are sensitive to classical antibiotic drugs but resistant to be eradicated from the UT. The result is often a chronic infection of the UT with tissue destruction, which, in turn, further enhances chronification. The objective of the current work was to test, whether therapeutic autovaccines (AV) enables a patients immune system to eliminate resistant *E. coli* from the UT. **Methods**: 1 volunteer who suffered from UTI caused by *E. coli* at least resistant to a number of antibiotics. UTI was observed in this disabled patient for longer than 6 weeks with one unsuccessful antibiotic treatment before start of AV. The AV was prepared following a technique described by Weiss et al (1998). Blood samples were obtained previous to AV, 7 days & 28 days after start of AV. Flow cytometry and lymphocyte proliferation assays were performed. Cytokines in supernatants of short term cultures were measured. **Results**: Although previous antibiotic treatment failed to reduce the count of colony forming units (cfu) in the patients urine, 10 days after start of AV therapy cfu declined from >10E6 per ml to ap. 10E4 per ml. 5 weeks after start of AV therapy no *E. coli* were detectable. The most prominent change observed by flow cytometry was a considerable loss of neutrophils between day 0 and day 7. The amount of neutrophils was comparable to that measured on day 0 when blood obtained on day 28 was measured. This observation is in good agreement with observations of HARAOKA et al (1999) in a mouse model for studying the role of neutrophiles at the sites of mucosal surfaces. **Conclusions**: We conclude that autovaccination with specific therapeutic autovaccines is a useful method in cases of chronic or chronic recurrent UTI caused by *E. coli*. Our results indicate migration of neutrophils out of the peripheral blood upon start of autovaccination therapy.

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