

Changes in the Urinary Bladder Caused by Short-Term Permanent Catheter Insertion

BACKGROUND: Short-term urinary bladder drainage using a permanent Foley catheter is practised frequently in hospitals. The catheter usually hurts the bladder mucosa and submucosa to various degrees. The aim of this study was to show pathological changes observed during a time period of one to 30 days of catheter treatment. **METHODS AND RESULTS:** Samples for histological testing were taken from the posterior wall of the bladder of deceased patients. The posterior wall exhibited maximal injury. Same steps were done in 10 bladders of the deceased patients who had not been catheterized at all. There were 41 patients in the tested group, of an average age 70 years (22 men and 19 women). In microscopy the mucosa was oedematous, hyperaemic with ectatic vessels and haemorrhages. Polyps were also seen, some of them haemorrhagic. Polypous cystitis was revealed in 29 cases (70%), and various mucosal defects in 12 cases (29%). A predominance of fibroblasts was observed in the reactive stromal cells of the bladder wall. **CONCLUSIONS:** Polypous cystitis develops already in the first days after permanent catheter insertion. The recent polyps present an inflammation caused by mechanical injury. The number of reactive stromal cells increases only partly on the dependence on the duration of permanent catheter treatment. These are abundant in the polyps and where mucosal defects occur. The presence of these cells may also be influenced by spontaneous chronic inflammation or nodular prostate hyperplasia in men. The occurrence of eosinophilic leucocytes was not observed until 3 days after catheter insertion. We cannot see any relation between the reactive stroma cells and mastocytes or with eosinophils.

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