

## HISTOPATHOLOGIC PATTERNS AND DISTRIBUTION OF MAST CELLS AND NERVE FIBRES IN INTERSTITIAL CYSTITIS (IC) AND ITS IMPLICATIONS FOR SURGICAL THERAPY

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**INTRODUCTION & OBJECTIVES:** Interstitial cystitis is a chronic disease characterized by bladder pain, urgency and frequency. IC is diagnosed by clinical symptoms according to the criteria of the National Institute of Arthritis, Diabetes, Digestive and Kidney Diseases (NIDDK). So far there is no pathognomonic proof of IC, therefore cystoscopy and biopsies were often only performed to exclude a carcinoma in situ. However, mast cells and nerve fibres seem to play a key role.

**MATERIAL & METHODS:** The study population consisted of 32 females and 3 men with IC based on NIDDK symptom and exclusion criteria. In general anaesthesia, a cystoscopy and a bladder distension were performed. Then, deep biopsies with the cold loop were taken from the bladder wall, dome, base and trigone. All samples were labelled and send separately to pathology. In order to measure mast cells and nerve fibre density a Giemsa and an immunohistochemical S-100 staining was performed.

**RESULTS:** Punctiform haemorrhages (glomerulations) and in 4 cases also ulcerations (Hunner ulcer) were found in 26/32 (81%) of the patients. In 28/32 (87.5%) cases, a typical detrusor mast cell infiltration and a nerve fibre proliferation were observed. Interestingly, the biopsies of the bladder trigone showed in all 28 cases also the typical histomorphological findings. Moreover, in 39% the detrusor mast cell infiltration and the nerve fibre proliferation were most prominently in the in the detrusor of the trigone. A carcinoma in situ was discovered in one male patient.

**CONCLUSIONS:** These results support the hypothesis, that IC is a disease of the entire bladder. Moreover, in about 1/3 of the patients the trigone involvement was most prominently. If surgical treatment becomes necessary, these findings should be considered in the decision of sub- and supratrigonal cystectomy.