Neurogenic appendicopathy: a frequent, almost unknown disease picture. Evaluation of 816 appendices and review of the literature

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BACKGROUND
Neurogenic appendicopathy (NA) represents an almost unknown pathology which clinically cannot be differentiated from acute appendicitis. The diagnosis can only be established histologically. Nerve proliferation and an increased number of endocrine cells are typical for NA. This study characterizes the epidemiology, histology, clinical appearance and therapy of NA. We evaluated the incidence of NA in macroscopically normal specimens from patients presenting the symptoms of acute appendicitis and in incidental appendectomies.

PATIENTS AND METHODS
816 routine appendix specimens were examined at the Institute of Pathology, University of Basel, for the presence of NA. We analyzed the indication for appendectomy, the histological form and the age and sex of the patients.

RESULTS
140 appendices (17.1%) showed the histological criteria for NA. 25% of incidental appendectomies were positive for NA, as opposed to 53% of the macroscopically normal specimens of patients presenting the symptoms of acute appendicitis (P < 0.0001). NA is more frequent in men than in women (19.5% versus 14.5%, P = 0.057). Out of the total of 140 NA, 105 (12.9%) were classified as central, 12 (1.5%) as intramucosal and 5 (0.6%) as submucosal forms of NA. 18 times (2.2%) the histologic subtype of NA was not specified.

CONCLUSIONS
This study establishes that NA is a frequent, often asymptomatic pathology. In more than half of the macroscopically normal specimens of patients presenting symptoms of acute appendicitis NA can be diagnosed, significantly more than in incidental appendectomies. Therefore it is imperative to remove and analyze a macroscopically normal appendix in a patient presenting symptoms of acute appendicitis if no other intraabdominal pathology can be found.
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