**Combined therapy vs. monotherapy in anal fissure.**  
A prospective, randomised study with 60 patients

**Original title / Originaltitel**
Kombinierte Therapie vs. Monotherapie zur Behandlung von Analfissuren.
Eine prospektive randomisierte Stuiden an je 60 Patienten

**Summary / Zusammenfassung**
Anal fissures can be classed as primary when originating from a healthy anus and as secondary when following previous injuries to the anal region or as a complication of any other disease state. Trauma caused by hard faeces and the loss of anoderm elasticity, together with chronic inflammatory processes (cryptitis, incomplete anal fistula und haemorrhoids) and over-stretching represent the most important etiological factors of the primary fissure. In an acute state the fissures can be seen as longitudinal defects/small injuries/scaring of the external anal canal. Histologically, inflammatory granulation tissue is found at the bottom of the fissure. Without any treatment, this inflamed tissue will be subjected to fibrosis affecting the central layers of the internal sphincter and will develop into a chronic fissure. A high sphincter resting tone due to pain is considered to be a major cause for the development of chronic fissures. Acute fissures tend to heal well spontaneously provided no spasms of the sphincters occur. The choice of treatment for anal fissures ranges from conservative suppository or cream therapy to surgical excision with additional splitting of the underlying internal sphincter. The aim of these therapies is to lower the sphincter tonus temporarily in order to facilitate the healing process. In a recently published study, the combined therapeutic effect of botulinum-toxin type A and nitroglycerine cream compared to the sole use of botulinum-toxin in regards to the healing/recovery rate, was investigated. The results of the combined therapy demonstrated 73% healing success, whereas only 25% with botulinum-toxin alone as a second-line therapy. The combined therapy has lead to a more pronounced decrease of the resting anal pressure. In our clinic we use a step-by-step therapy for treating anal fissures. First we apply a conservative type of therapy prescribing nitroglycerine cream; however, if failing to obtain any satisfactory results or should any serious undesirable side-effects occur, we will then proceed to a fissure debridement with an injection of botulinum-toxin under anaesthesia. In a randomised prospective three-part study we will test and assess nitroglycerine cream therapy, botulinum-toxin injection therapy and the combination of both and assess the outcome in regards to healing rate, recurrence rates, side-effects and length of therapy.

**Keywords / Suchbegriffe**
anal fissure, botulinum-toxin, nitroglycerine cream

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**Funding Source(s) / Unterstützt durch**
Private Sector (e.g. Industry), Others
Duration of Project / Projektdauer
Sep 2003 to Feb 2005