

Study on anorectal and colorectal diseases

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Summary and conclusions

The aim of the work in this thesis was to study the epidemiology, diagnostic procedures and therapy of anorectal and colorectal diseases. Several topics were studied to approach this goal. Some studies analyzed acceptability and tolerability of the investigations and treatments, since patient compliance is important for a successful result.

Anorectal complaints are debilitating and form a frustrating problem for both patients and their doctors. Patients are often referred for anorectal function evaluation (AFE). The aim of the study in **chapter 2** was to determine which referrals of the patients with anorectal symptoms for AFE were indicated to establish a diagnosis with subsequent therapeutic consequences. In a retrospective study from 216 referred patients, only 65% of referrals were indicated. AFE has therapeutic consequences for some diagnoses like in faecal incontinence without diarrhea, 3rd degree sphincter rupture, pre-operative for stoma or re-anastomosis, fistula, fissures and sometimes constipation. Anal ultrasound is always indicated in patients with fistula, manometry and rectal compliance only when impaired continence reserve is suspected. In 80% the advice was followed: in 35% of the patients the complains were improved and 57% of the patients was reassured. The effect of advices was also studied and consisted of dietary, physiotherapy, medications and surgery. On a VAS scale (1 to10) complains improved an average of 3.2 points. Most patients tolerated AFE very well and perceived minimal discomfort during AFE. It is important to provide better information for referring doctors about diagnostic possibilities of the AFE to ensure the most optimal advantage of indicated referrals.

Therapy for faecal incontinence remains a difficult issue and is often inadequate. Temperature-controlled radiofrequency energy (SECCA) is a therapy with favorable results in few open studies. In **chapter 3** we report the promising results of this relatively new therapeutic method. The mode of action of this treatment seems to be the increased rectal sensitivity.

We treated 11 women with long existing faecal incontinence complains.

In three months time, 6 of them improved and this improvement persisted during the follow-up of 1 year. Anal manometry and rectal compliance showed no significant changes between those who improved and those who did not. The treatment was well tolerated and side effects such as local haematoma, minor bleeding, pain persisting 1-3 weeks and laxatives-related diarrhea during 1-3 weeks were acceptable. However, more investigations and placebo-controlled studies are warranted with a larger number of patients and longer follow-up.

Irritable bowel syndrome (IBS) is an invalidating common functional disorder. IBS has a wide range of symptoms, though specific symptoms are lacking. In this way IBS can easily mimic other diseases in the (lower) abdomen, thus causing delay in establishing the right diagnosis and giving the appropriate treatment. We have studied these difficulties in **chapter 4**. Hundred and one patients with proven endometriosis were included from the gynecological outpatients clinic. By means of a questionnaire patients who complied with Rome III criteria were referred to our gastroenterological outpatient clinic. Fifteen percent of the patients had additional IBS and 14% had functional constipation without IBS. Of the 22 patients finally presented to the gastroenterologist, 5 had a significant stenotic rectosigmoid and underwent surgical resection of the involved bowel segment with primary anastomosis. Four of the operated patients improved clinically and had no symptoms, the fifth had a stenotic anastomosis and was successfully dilated. The remaining 17 patients were treated conservatively with laxatives and fiber. Defecation symptoms improved in 86% and pain was reduced in 64%. For many women with endometriosis and additional IBS or chronic constipation good cooperation between gynecologist and gastroenterologist is essential and can give symptom relief in a shorter time. However, for many women with endometriosis management of pain is still insufficient.

The prevalence of diverticulosis and subsequently diverticulitis is increasing the last decades. Diverticulosis increases with age. It is estimated less than 10% in those under the age of 40 and increases to 65-70% in those above 65 years of age. Therefore, diverticulitis is also increasing. Predominant western lifestyle increases this pathology, with all their complications and consequences. In **chapter 5** we review the literature concerning the pathogenesis, prevalence, diagnostic procedures and therapeutic options of diverticulitis.

In the literature the relationship between diverticular disease and colorectal cancer has been suggested. Considering the increasing prevalence of diverticular disease and incidence of colorectal cancer in younger patients, this might have consequences for colorectal cancer surveillance. In **chapter 6** we studied the possible risk for colorectal neoplasia or polyps in 4,241 colonoscopies of patients with diverticulosis and diverticulitis. Diverticula, diverticulitis, and polyps were found in 25%, 2% and 30% of the colonoscopies, respectively. However, no association was found between patients with polyps and those with or without diverticulosis. Colorectal cancer was found in 9% of the patients. We observed a negative relation between diverticulosis and colorectal cancer and invasive adenocarcinoma. We could not find any association between polyps, diverticulosis or diverticulitis and increased risk for colorectal cancer. A drawback of the study was the underreporting of polyps and their possible earlier removal as well as the lack of long term follow-up.

In **chapter 7** the relationship between diverticulitis and colorectal carcinoma was studied in a retrospective, longitudinal study. In 288 patients the colonoscopies and pathology registry PALGA of the patients admitted to our hospital with diverticulitis were analyzed. Colorectal cancer and colonic adenomas were detected in 1,7% and 6,3% of the patients, respectively. However, again this study showed a lower prevalence of colorectal cancer and colonic adenomas in patients with diverticulosis.

Underreporting is possible due to the retrospective character. More attention and further prospective, longitudinal studies are warranted about this subject. So far, a strong relationship does not seem likely.

Patient compliance is an important factor for successful establishing a diagnosis or following a therapy. Colonoscopy is still the most important tool in screening and surveillance programs of patients with colorectal disease. Adequate preparation of the colon is important for good quality and safety of the examination. **Chapter 8** refers to a prospective, randomized study comparing the effectiveness of two preparation in 110 patients referred for elective colonoscopy with 3 litre sulphate-free polyethylene glycol solution (SF-PEG) or 4 litre PEG. Data was analyzed with respect to stool frequency, medication, concomitant diseases and diverticular disease diagnosed during the investigation. No differences were found between two regimes of preparation in cleansing the rectosigmoid or complete colon. Moreover diverticulosis and constipation had no influence on quality of cleansing. Both preparations had comparable acceptability and tolerability of the colon cleansing, however patients preferred cleansing with a smaller volume of solution. This can improve the compliance of the patients and improve their acceptance for colonoscopy.

Treatment of chronic constipation is not always easy and usually life-long. Laxatives often do not have an encouraging taste to use it for a long time. For this reason poor compliance and effectiveness of the treatment is only in 66% of patients sufficient. **Chapter 9** describes a study, which compared the taste of two polyethylene glycol preparations for patients suffering from constipation. In a double blind, cross over, randomized trial 100 volunteers tasted both preparations. They gave score on 5-point scale of taste. The taste score for PEG 4000 was significantly better than for PEG 3350. Whether this results in long-term better compliance for PEG 4000 can not be established from these data.

Conclusions

This thesis allows several conclusions on epidemiological, diagnostic and therapeutic field of anorectal and colorectal diseases.

1. The anorectal function evaluation has therapeutic consequences only for some diagnoses. Good education and awareness of anorectal diseases is important for prompt treatment and / or indicated referral.
2. Temperature-controlled radiofrequency energy can be a new therapy for faecal incontinence in the near future.
3. In patients with endometriosis and in addition IBS or chronic constipation gastroenterological consult can contribute to better symptom relieve. The gynaecologist is also an important partner for the gastroenterologist.
4. Diverticulosis and diverticulitis form no increased risk for colorectal cancer.
5. Success in treatment depends on good compliance of the patients, so palatability and amount of volume intake are important issues.

Implications

More education in anorectal disorders is necessary and problem orientated pelvic floor units will be developed.

New therapies for faecal incontinence will emerge, since none of the existing ones are adequate. SECCA may be one of them. This method has shown a promising effect in USA, where this treatment has already 5 years follow-up and there are many new studies published. We have already started prospective, longitudinal, randomised study.

Interest in diverticular disease and diverticulitis is growing, since the disease is so widespread and can have a (life) threatening course. More longitudinal, prospective studies are warranted concerning different aspects of diverticulitis.

At last, patient compliance is a very important issue which will receive even more attention in the future. Not only taste, but also other life style issues will be introduced.