The continuing story of peptic ulcer bleeding
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Chapter 1

Outline of the thesis
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Upper gastrointestinal bleeding is an important emergency situation. Peptic ulcer bleeding (PUB) is responsible for about half of all cases of upper gastrointestinal bleeding. The introduction in chapter 2 gives a general overview of different aspects concerning peptic ulcer bleeding. Epidemiological data, risk factors, endoscopic and pharmaceutical management for PUB are discussed. The etiology of ulcer development and the cause of ulcer bleeding has for a long time been a source for intense investigations. The first association between ulcer bleeding and consumption of salicylic compounds was made in 1877. Nowadays both the use of acetylsalicylic acid (aspirin) and/or non-steroidal anti-inflammatory drugs (NSAIDs) and Helicobacter pylori infection are considered the most important factors in the etiology of ulcer formation. However, there is still debate about the role of H. pylori in complicated ulcer disease. Whether both H. pylori and NSAID use are independent risk factors for PUB is also unclear. Different perspectives are discussed. The different available endoscopic haemostatic modalities are evaluated and an overview of randomized trials is given. Also the value of antisecretory drugs and the role of surgery and transcatheter arterial embolisation are discussed. Rebleeding and mortality in patients with PUB remains substantial, despite advances in endoscopic and pharmaceutical therapy.

Chapter 3 describes the results of a national inquiry among endoscopists in The Netherlands regarding current management of peptic ulcer bleeding. There are rather substantial differences in management between internists and gastroenterologists treating patients with PUB.

In 1993/94 a large epidemiological study of patients with acute upper gastrointestinal bleeding was performed within the Amsterdam area, including Haarlem, Zaandam and Alkmaar. This study was called ‘Amsterdam Bloedt’. More than 6 years later this epidemiological study was repeated in the same geographical area: ‘Amsterdam Bloedt II’. Several factors did change the last decades including the widespread use of endoscopic therapeutic methods, the introduction of proton pump inhibitors (PPIs) and the discovery of H. pylori. On the other hand, the population is aging, requiring more drug consumption, including aspirin and NSAIDs, and having more comorbidity. Chapter 4 describes the two
epidemiological cohorts of patients with acute upper gastrointestinal bleeding, respectively from 1993/1994 and 2000, comparing patient characteristics, incidence, and outcome. This chapter focuses mainly on peptic ulcer bleeding, because this is the most frequent source of bleeding. Time trends between the two cohorts are analyzed.

Recently a new non-invasive diagnostic test for H. pylori infection using stool antigens has been introduced. The sensitivity and specificity of this test is high for pre-treatment diagnosis of H. pylori infection. In chapter 5 we evaluate this test in patients with peptic ulcer bleeding.

In chapter 6 data of a retrospective study are presented, evaluating the outcome of surgery for peptic ulcer bleeding patients in the last 14-year in the Academic Medical Center in Amsterdam. Since the introduction of endoscopic therapy, surgery is only performed in patients in whom bleeding cannot be controlled by endoscopic therapy. Type and outcome of surgery are being evaluated.

Chapter 7 describes interobserver agreement for the Forrest classification among 56 endoscopists, classifying video-fragments with gastroduodenal ulcers. Furthermore, the relation between the Forrest classification and endoscopic echo-Doppler assessment of gastroduodenal ulcers is evaluated.

Data of a prospective study evaluating the additional diagnostic value of the endoscopic Doppler ultrasound system in patients with bleeding gastroduodenal ulcers are presented in chapter 8. The Forrest classification is a subjective classification of stigmata of recent hemorrhage. We evaluated whether decision about endoscopic therapy could be made by an objective assessment of the ulcer base using Doppler investigation. A superficial Doppler flow is indicative of the presence of superficial vessels, which might need treatment to prevent rebleeding and improve clinical outcome.

Finally, the summary in chapter 9 gives an overview of the thesis and discusses new insights in management of peptic ulcer bleeding. Also, recommendations and suggestions for future research are made.