Evaluation of diagnostics guidelines for hepatobiliary and pancreatic disease
Tilleman, E.H.B.M.

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (http://dare.uva.nl)
Introduction & Outline of the Thesis
Introduction

Patients with hepatobiliary and pancreatic carcinoma have a poor prognosis. At the time of diagnosis most patients suffer from incurable disease due to the extent of the tumor, in particular local ingrowth in the surrounding vascular structures or distant metastases.\(^1\)\(^2\) Surgical resection remains the only chance of cure. Palliative treatment can be performed surgically as well as non-surgical.\(^3\)\(^4\) As surgical palliative treatment is associated with considerable morbidity and even mortality non-surgical palliation is generally accepted as the treatment of choice for patients with metastatic disease.\(^5\)\(^6\) Tumor staging is therefore important to select patients who might be able to undergo a curative resection and those who need palliative treatment. Adequate staging can prevent unnecessary laparotomies.

During the past decades, the staging strategy for patients with hepatobiliary and pancreatic tumors has been changed radically from explorative laparotomy without previous radiological tests except for duodenography to a complete diagnostic work-up scheme, a protocol with many different radiological and endoscopic, invasive staging procedures. This change in treatment strategy led to a so-called decision tree, which describes what diagnostic procedures should be performed by preference in each situation,\(^7\)\(^8\) and more recently to the development of guidelines. The value of different radiological as well as endoscopical and surgical staging procedures depends on many factors, such as patient selection and the quality of the radiological tests. The accuracy of CT scan for detection of unresectable disease, for example, increased dramatically during the last years due to new scanning protocols and reduced thickness of the slides.\(^9\)\(^10\)\(^11\)

As a consequence of ongoing changes in and improvement of diagnostic procedures, most of the studies performed to validate the quality of these staging techniques are soon outdated and subsequently diagnostic strategies have to be adapted to new standards.\(^12\) Moreover, the evaluation of the effectiveness in different hospitals and in particular evaluation of the effectiveness of a complete set of diagnostic procedures, a diagnostic guideline, or a work-up strategy are not widely performed. Knowledge about the availability and the use of diagnostic resources is important for the formulation of a guideline, which should not only be evidence-based but also commonly applicable. It has therefore been questioned if the use of so-called consensus-based guidelines is generally accepted. An active method of guideline development and good feedback has been suggested recently and might be necessary to improve the success rate of the implementation and the use of these new guidelines.\(^13\)\(^14\)
Introduction

During the past decade, the departments of gastroenterology, radiology and surgery of the Academic Medical Center Amsterdam have had a special interest in the management of patients referred with hepatobiliary or pancreatic diseases. In an attempt to improve quality and cost-effectiveness of care, different studies have been conducted to evaluate different diagnostic and therapeutic procedures and more recently active participation in the development of guidelines was started. These findings were used to set up different studies among the above mentioned diagnostic problems in hepatobiliary and pancreatic diseases.

Outline of the thesis

In the first part of the thesis, the effectiveness of different diagnostic procedures for staging hepatobiliary and pancreatic malignancies is assessed. This part can be divided into two sections. In the first section separate diagnostic procedures performed in an academic center are evaluated, and in the second section a diagnostic process in general hospitals.

Implementation of guidelines for a diagnostic process in a single center, in particular in the center where the guideline was developed, is suggested to be less complicated than implementation in other hospitals or even countrywide. To differentiate between these different implementation processes, it was decided to study both. Furthermore, as implementation of a diagnostic guideline is suggested to be more complicated than implementation of a therapeutical guideline because the diagnostic process can consist of more than one procedure and be applied in a heterogeneous patient population, implementation of a therapeutic guideline is also evaluated.

In Chapter 2 the diagnostic accuracy of laparoscopic staging for detection of unresectable disease in patients with proximal bile duct tumors and the prevention of unnecessary surgical exploration is evaluated. In Chapter 3 a radiological staging procedure is evaluated. Preoperative CT scan findings are correlated with resectability rate at laparotomy to assess the prognostic value of tumor characteristics, preoperatively seen on CT scans of patients with potentially resectable pancreatic head carcinoma with regard to survival. If CT criteria can be identified that can predict survival, these may be helpful in selecting candidates for surgical therapy. Since the accuracy of diagnostic procedures partially depends on the accuracy of previously performed procedures, in Chapter 4 the change in the diagnostic algorithm is evaluated and the accuracy of diagnostic laparoscopy for staging periampullary malignancies in the Academic Medical Center during the last decade is described.
In Chapter 5 the sequence and the duration of the entire diagnostic process and treatment of patients diagnosed with a pancreatic carcinoma in the district of the Comprehensive Cancer Center Amsterdam is evaluated. This was done in order to be able to develop a guideline (that might be helpful in shortening the diagnostic period) that is applicable in the hospitals where it should be used. These data were used to develop a guideline for diagnostic work-up and treatment which is summarized in the appendix. In Chapter 6 the clinical importance was determined of reinterpretation of radiological investigations performed in a referring hospital on patients with a hepatobiliary or pancreatic malignancy, referred for diagnostic work-up and treatment to a referral center.

In the second part of the thesis, the implementation of three different guidelines is evaluated. First, a change in the diagnostic process by abolition of one diagnostic procedure from the work-up is described in Chapter 7. The initial results of diagnostic laparoscopy in staging of patients with a periampullary malignancy were promising, but decreased over the years and a substantial number of endoscopically palliated patients needed a late laparotomy due the gastrointestinal obstruction. Therefore, the effect of abolition of diagnostic laparoscopy on the incidence of unnecessary laparotomies and the outcome after bypass surgery were assessed.

In the district of the Comprehensive Cancer Center Amsterdam / Stedendriehoek Twente (IKA/IKST) a new guideline for diagnosis and treatment of distal bile duct and pancreatic carcinoma was developed. This guideline is summarized in the appendix and in Chapter 8 the implementation and the effect of this guideline is described. Finally, in Chapter 9 the implementation of a guideline of a therapeutic procedure, namely day-care treatment of laparoscopic cholecystectomy instead of laparoscopic cholecystectomy with clinical admittance, in one center and countrywide is evaluated.

References


