Tubal subfertility and ectopic pregnancy. Evaluating the effectiveness of diagnostic tests
Mol, B.W.J.

Citation for published version (APA):
Preface

In recent years the necessity to base clinical decisions on evidence obtained in clinical research has been emphasized.\textsuperscript{1,2} Evidence based medicine, defined as the judicious and conscientious use of current best evidence from medical care research for making clinical decisions, is considered by many as an important tool to improve clinical practice.\textsuperscript{3} Although some consider the concept of 'evidence based medicine' as a new paradigm, stressing the importance of evidence-based clinical practice is not as new as it seems to be.\textsuperscript{4} Good doctors have \textit{always} made use of the best available evidence, as well as experience and judgement.\textsuperscript{5}

The increased demand for health care, the explosive development of medical technology and the limited health care resources in Western countries have increased the need for rational decision making in clinical medicine. At the same time, information technology has increased the quantity and improved the quality of clinical studies, but, even more important, also facilitated the access to this clinical evidence. Clinicians are now confronted with an increasing demand to provide medical care according to the current best available evidence and with growing sources of information from which this evidence can be obtained.

Several methods have been developed to support the clinician that wants to base clinical decisions on the best available evidence. The randomized clinical trial is generally considered as the gold standard for the evaluation of therapy. In absence of large randomized clinical trials, meta-analysis of multiple small trials is an alternative tool for increasing the precision of the estimate of the effectiveness of therapy.

In contrast to therapy, the methods for diagnostic test evaluation are still under development. The use of sensitivity and specificity to describe the accuracy at which a test can detect a condition is now widespread, and an increasing number of clinicians has become familiar with the use of likelihood ratios and Receiver Operating Characteristic curves.\textsuperscript{6,7} Yet, whether or not patients are better of from undergoing a diagnostic test will depend on how test information is used to guide subsequent decisions. In most cases, these will be decisions to start, stop or modify treatment. Consequently, the value of a diagnostic test can only be assessed by taking into account subsequent consequences of treatment.

This issue is the central theme of this thesis. Two clinical problems are used to illustrate the methods of diagnostic test evaluation; the diagnosis of tubal pathology in subfertile women and the diagnosis of ectopic pregnancy. In both examples, the value of diagnostic tests will be determined by relating results of the test under study to decisions on therapy and clinical consequences. Theoretical concepts of the evaluation of diagnostic tests are discussed in the last part of this thesis.

References


