MEDICAL PROGNOSIS – SOME FUNDAMENTALS

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ABSTRACT. Background: The concept of prognosis as a prediction concerning the probable outcome of an attack of disease shows some severe contextual drawbacks in the everyday clinical sense. It is often used to describe possible outcomes of the disease in general, or the progression of a disease course, not the expected course in a particular case.

Goal: To render more discriminating uses of the term prognosis, in order to provide the prognosticating physician with a valid tool, comparable to the theoretical basis of diagnostic and therapeutic actions.

Procedures: Analysis and discussion of etymology, definition and practical usage.

Conclusion: Prognosis is not to be considered soothsaying, but forecasting on qualified grounds. Prognostic statements are announcements containing prognostic information. Prognostic factors are pieces of information associated with a specific outcome of disease, which can be utilized in the formulation of the prognosis. Prognostic estimates involve subjective probability and can be formulated by using frequencies along with (clinical) experience. A prognosis is a prediction of a particular future stage of disease, considering a single case – the prognosis is neither part of the patient, nor part of the disease.

Key words: clinical decisions, forecasting, Hippocratic medicine, medical philosophy, probability, prognosis

1. INTRODUCTION

The daily routine of the practicing physician is widely made up of diagnosing and treating diseases, some common, others quite rare; some appear typical, others have atypical manifestations or undergo unexpected evolutions. The practicing doctor may also take prophylactic measures into consideration for some of his patients. These three modalities of clinical work, diagnosis, therapy and prophylaxis represent different paths of medical thinking, although some common properties are involved as far as analysis, probabilistic bearings, decision making and importance for the patient are concerned.

In the following, an attempt will be made to frame the fourth key measure of clinical practice – the prognosis – and point out that, to a certain extent, thinking along this line differs compared to the other three. Prognostication exhibits certain peculiarities in the management of probabilistic information and
demonstrates a clear lack of logic in some of the ways it is expressed. I acknowledge that disclosing a prognosis varies according to particular cultural and social norms around the world and furthermore that the disclosure bears major ethical perspectives. The context from which the ideas in this article are derived has been medical practice as experienced in the Kingdom of Denmark. Subsequently, the analysis as well as the conclusions may be restricted to prognosis as conceived and performed in the Western world.

2. THE CONCEPT OF PROGNOSTICATION

The word prognosis is derived from Greek and means foreknowledge (προ [pro]: beforehand and γνωσίς [gnosis]: knowledge). Modern usage of the word is ample and displayed in a variety of topics, including economics, meteorology, lotteries and election results. The meaning in these contexts being a forecast or an estimate of a final outcome based on preliminary data and calculations.

In medical terminology, a prognosis is: “a forecast as to the probable outcome of an attack of disease, the prospect as to recovery from a disease as indicated by the nature and symptoms of the case” [1]. Whenever used in this text, prognosis means prognosis in the medical sense.

Traditionally, disease forecasts are constructed with reference to particular aspects of the disease and set forth as sentences of implicit relativity, containing words such as chance, risk, average etc. Sentences that purvey prognostic information are called prognostic statements.

Basically, the different aspects of a disease comprised by prognostic statements are:

(A) Duration (of the attack, of survival)
(B) Recovery (usually full recovery, as opposed to incomplete recovery/no recovery)
(C) Survival (as opposed to death due to the disease)

In countries where Latin\(^1\) is still a sound basis of the medical language, these three aspects are found in fixed compound terms:
- prognosis quoad tempus
- prognosis quoad restitutionem
- prognosis quoad vitam

i.e. the prognosis as to time, recovery and life.

These three aspects are considered emblematical of prognostic statement categories and were discussed as early as the time of Hippocrates. Their