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Preface

The main idea behind *Case Studies in Dementia* is to provide an overview of the spectrum of clinical presentations of various diseases, which have dementia as a common denominator. As a rapidly expending field of clinical neurology, the differential diagnosis and clinical assessment of dementia is becoming progressively more sophisticated and complex. We hope that these case studies will prove useful to medical students, family doctors and neurology residents in their understanding of neurology and the care they provide to their patients.

Serge Gauthier and Pedro Rosa Neto
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This chapter will outline general strategies to establish the presence and the differential diagnosis of dementia, and the case studies in this book will allow the reader to explore more in-depth specific causes of dementia across different age groups. We emphasize the diagnosis of dementia in this book, the first step in the management of dementia.

**Is dementia present?**

A broad interpretation of the current definition of dementia written in the DSM-IV-R is that an intellectual decline involving at least two cognitive domains must be sufficient to interfere with daily life. Thus the clinician must establish through a systematic history with the subject and an informant if there is a decline in memory, language, praxis, gnosis, and/or executive abilities, and if this decline is associated with impairment in activities of daily living (ADL).

Screening questions about changes within the past year in recall for appointments, recent events, or conversations, can be followed immediately and during a follow-up visit with more detailed questions relevant to:

1. Memory: do you look for things in your room; do you need reminders for appointments
2. Language: do you say sometimes “give me the thing there, what do you call it?”
3. Praxis: do you have difficulty using kitchen appliances or tools?
4. Gnosis: do you have difficulties recognizing people?
5. Executive abilities: do you find it harder to plan a meal for the family or friends; do you need help when playing a card game, can you adjust if there is a change of plans?

Testing for cognitive impairment is usually done using the Mini-Mental State Examination (MMSE; Folstein et al., 1975). If the MMSE is above 26/30, the Montreal Cognitive Assessment (MoCA; Nasreddine et al., 2005) is usually performed, also giving a total score of 30, but encompassing some executive tests such as the Trail B and the clock. More detailed neuropsychological tests may be required depending on the level of education of the subject, the nature of his complaints (language for instance), and the severity of his decline. Thus, the Severe Impairment Battery is used if the MMSE is below 15/30 (Panisset et al., 1994). From population studies (Pérès et al., 2007), four ADLs were found to be particularly altered in early dementia:

1. use of telephone and other means of communication
2. planning an outing and completing it efficiently
3. using medications safely
4. using money appropriately.

These specific ADLs can be asked about for screening purpose, followed immediately or during a follow-up visit with questions on other instrumental (meal preparation, leisure, and housework) and basic (hygiene, dressing, continence, eating) ADLs.

Although surprisingly missing from the current definition of dementia, neuropsychiatric symptoms can precede the onset of cognitive decline and nearly always accompany them. It is thus important to ask about the following common symptoms in a semi-structured way or using an instrument such as the Neuropsychiatric Inventory (NPI; Cummings J, 1997).

1. apathy
2. agitation and aggressivity
3. anxiety and depression
4. aberrant motor behaviors
5. delusions and hallucinations
6. irritability
7. night-time behaviors

What is the cause of dementia?

It is surprising how a good history addressing the common cognitive, functional (ADL), and behavioral symptoms encountered in dementia will lead to a short differential diagnosis, since the most common causes of dementia have a typical pattern of presentation:

Alzheimer’s disease (AD) may be preceded by a prodrome of anxiety, mild depressive mood, irritability, nearly always starts with impaired recent memory,