Chapter 14

Assessment of Cognitive–Communicative Functions in Persons With Mild Cognitive Impairment and Dementia of Alzheimer’s Type

Reuben Thomas Varghese
All India Institute of Speech and Hearing, India

S. P. Goswami
All India Institute of Speech and Hearing, India

ABSTRACT

According to world population prospects data report, older individuals, especially those aged 60 years and above, have increased substantially over the recent year, which is going to accelerate in the coming decades. The most common problems the aging population faces are dementia of the Alzheimer’s type (DAT) and mild cognitive impairment (MCI). Assessment of cognitive-communicative markers is essential for persons with MCI and DAT. Furthermore, it can help in the differential diagnosis of DAT and MCI. Proper assessment by speech-language pathologists is warranted in this area as it will throw light on the differential diagnosis of MCI and DAT, the clinical description of the characteristics between the two clinical groups, the prognosis for improved outcomes, recommendations for intervention and support, and referral for other professionals for assessments or services.

INTRODUCTION

According to world population prospects data report (DESA, 2015), older individuals especially those aged who are 60 years and above have increased substantially over the recent year, which is going to accelerate in the coming decades. The number of people in the world aged sixty years or over is expected to increase by 56 percent between the years 2015 and 2030. The recent advancement in health care facilities and better living conditions has resulted in the longevity of human life. Due to this change, it is
indeed time to pay more focus to the problems that the aging population faces, one of the most common amongst them is dementia. Persons having Dementia of Alzheimer’s type (DAT) is one of the fastest growing clinical populations. Prince et al. (2013) reported that by the year 2030, around 65.7 million people will be affected and 115.4 million will be affected by 2050 by Dementia. Speech-Language pathologists (SLPs) form one of the core team members who are qualified to treat the cognitive-communicative disorders associated with dementia. Early identification of dementia along with Mild Cognitive Impairment-which constitutes the earliest manifestation of clinical symptoms of dementia, has become a matter of research recently.

MILD COGNITIVE IMPAIRMENT (MCI)

According to the Diagnostic and Statistical Manual of Mental Disorders- Fourth Edition (DSM-IV) American Psychiatric Association (1994), Mild Cognitive Impairment (MCI) is defined as an intermediary stage between the cognitive stages of normal elderly aging and the mild degree of dementia. Petersen et al. (2001a) reported that persons with MCI have more risk of progressing to clinically probable DAT.

Sub-Types of MCI

According to Petersen et al. (2001b), based on cognitive features MCI can be divided into

1. **Amnestic MCI**: These individuals have impairment predominantly in memory.
2. **Multiple Domain MCI**: These individuals have impairments noticed in more than one cognitive domain which can include memory.
3. **Single Domain Non-Amnestic MCI**: These individuals have impairment in any one cognitive domain apart from memory.

Dementia

Dementia describes a group of brain disorders which can progressively lead to brain damage, and subsequently lead to gradual deterioration of a person’s functional capacity and socio-cultural relations. The term dementia is originally derived from Latin word ‘de mens’ meaning a decline in mental abilities. Cummings, Benson, and LoVerme (1980) reported that at least three out of the following five areas-memory, language, visuospatial skills, emotional skills, personality and cognition must be disrupted in persons with dementia. The definition according to Diagnostic and Statistical Manual of Mental Disorders- Fourth Edition (DSM-IV) (1994) states that the most prominent feature among dementia is the impairments in both short-term (STM) and long-term memories (LTM). These memory deficits may also be associated with one or more concomitant features like agnosia, aphasia, apraxia, impairment in abstract thinking, and personality changes. The salient features for diagnosis of dementia are

1. Impairment in both short term and long-term memory.
2. Impairment in abstract thinking and judgment.
3. Personality changes.
4. Specific organic factor.
5. The absence of a non-organic factor as a reason for the symptoms like depression.