Chapter 15
Neurological disorders

LEARNING OBJECTIVES

After reading and studying this chapter and participating in lecture and discussion, students should have an understanding of:

- The neurological processes that result in Alzheimer's disease and MS.
- The psychological consequences of these diseases.
- Interventions aimed at improving or maintaining both cognitive functioning and well-being as the diseases progress.
- The immediate and long-term cognitive consequences of head injury.
- Interventions used to maximize recovery following head injury.

CHAPTER OUTLINE

15.1 Alzheimer's Disease
- Aetiology of Alzheimer's Disease
  - Neurological processes
  - Modifiable risk factors
- Treatment of Alzheimer's Disease
  - Pharmacological interventions
  - Psychological approaches
  - Helping the carers

15.2 Neurocognitive Disorder due to Traumatic Brain Injury
- Rehabilitation following head injury

15.3 Multiple Sclerosis
- Aetiology of MS
  - Genetic factors
  - Biological mechanisms
  - Stress and MS

Psychological sequalae of MS
Cognitive problems
Emotional reactions
Treatment of psychological problems associated with MS
Coping with cognitive deficits
Coping with emotional problems
Helping the carers

QUESTIONS FOR DISCUSSION

These may be useful to use at the beginning of the teaching session to get a sense of where people lie on these issues, to spark some interest in them, and as a link to refer to as the lecture progresses.

1. Which of the following is not a characteristic of Alzheimer's Disease?
    a. Amnesia
    b. Agnosia
    c. Amenorrhea
    d. Apraxia

2. What of the following is not a recognised stage of the development of Alzheimer's Disease?
    a. Pre-senile cognitive decline
    b. Mild dementia
    c. Moderate dementia
    d. Severe dementia

3. Which of the following is a form of therapy designed to improve psychological functioning in Alzheimer's Disease?
    a. Reality-focused CBT
    b. Reality-focused interpersonal therapy
    c. Reality orientation
    d. Reality enhancement therapy

4. Which of the following is not a treatment approach for people with serious head injuries?
    a. Attentional re-training
    b. Environmental manipulation
    c. Medication including methylphenidate hydrochloride
    d. Memory retraining

5. Which of the following statements are not true?
    a. Mania can be a presenting symptom of MS
    b. Depression as a consequence of neurological damage may pre-date MS
    c. Manic-depressive symptoms can occur in MS due to neurological damage
    d. Depression can occur in MS due to neurological damage

LECTURE SUGGESTIONS

The chapter addresses three types of neurological disorders and the psychological problems associated with them. One, Alzheimer's Disease, is a pathological disorder that results from primary degeneration of a number of neurological systems. A second also involves damage to neurological functions as a consequence of disease and can result in similar difficulties. MS can result in what some have called MS dementia, but this is an unhelpful and inaccurate term as any neurological deficits are usually less severe and more limited. The term 'cognitive difficulties' is both more accurate and more acceptable. Between these two conditions, the chapter addresses the psychosocial consequences and attempts at their remediation following severe head injury. These can be profound and life changing, and although modest improvements can be achieved, they fit within a chronic model of disorder found for AD and MS.

AD is just one form of dementia: the two terms are not synonymous as many assume. There are at least eight other relatively common forms, including vascular and frontotemporal dementia, and rarer forms including progressive supranuclear palsy and Pick's disease. It is a progressive disease that can be slowed in its early stages by drugs that impact on acetylcholine and beta amyloid. Unfortunately, at the time of writing these drugs may delay deteriorating cognitive function in the early stages of the disease, but do not prevent it. Accordingly, people with AD may also benefit from psychological interventions. These may be divided into three basic types: (i) those that aim to maintain contact with factual elements of the world (e.g. reality orientation), (ii) those that aim to support cognitive processing (cognitive stimulation), and (iii) those that support life evaluation and reflection (e.g. validation therapy). Each appears to be of modest, at best, benefit, but remain the key available interventions.

Deficits following traumatic brain injury can be profound, and as well as the emotional consequences of coping with both potentially traumatic memories, the person has to cope emotionally with a loss of competence and even independence. I remember spending time in a neuro placement during my clinical training and visiting one such person. His house (or what I could see of it) was a swathe of reminder notes on walls, doors and a central pillar within the kitchen/diner. In some ways it all seemed too much, and for me at least very confusing, but it was a stark insight into this person's need for constant reminders and cues to action to give his life some normality. In the absence of these cues, if he were to leave the house, he could rapidly get lost. I also remember visiting the Oxford Rivermead (neuro rehabilitation) Centre, where one person had so little insight into their profound memory problems, they firmly believed they did not have any – much to the annoyance of his fellow patients! Barbara Wilson was the lead psychologist at the time, and her research in training people with severe head injuries showed that, after significant training periods, they were able to learn to walk from the same

pre-determined place to another pre-determined place in the grounds of the centre. However, they showed no generalisation to other similar challenges. The challenge in working with people with moderate to severe head injury is profound.

Finally, people with MS experience significant cognitive deficits over time. Depending on the type of MS, they may face the emotional challenges of coping with a rapid deterioration in their abilities, both physical and mental, and of living with the knowledge of potential exacerbations and reductions in cognitive and/or physical abilities in the future. As in health anxiety disorder, anxieties about future events are challenging to cope with, as their possibility cannot be denied. So, treatment approaches such as mindfulness or ACT appear particularly pertinent for this group.

Classroom Activities

Small group discussion: It is ethically and morally appropriate to engage individuals with Alzheimer's Disease in therapies such as reality orientation which may involve recall of distressing as well as life enhancing information?

Personal reflection: Someone with profound memory problems as a consequence of disease or injury may require constant supervision and guidance. They may struggle to make every day decisions, appear confused at times, or be unaware of their memory deficits and therefore wish to engage in risky behaviours such as driving a car they are incapable of driving safely. They may need reminders to do even routine behaviours or not know where to find frequently used things within the home. Imagine yourself as their partner. How is this likely to impact on your day to day life, interpersonal relationships and future expectancies? How would you cope with the profound difficulties this situation presents?