Alzheimer's disease (AD) is the commonest cause of dementia (chronic brain failure). Other causes include vascular dementia (strokes), dementia with Lewy bodies and Parkinson's disease. AD is a medical condition affecting the brain. It becomes more common with increasing age, but is not an inevitable part of ageing. There is a progressive loss of mental abilities and increasing dependency. The course of the illness varies, but is generally over several years.

Who gets AD and why?

The cause of most cases of AD is not known. With a family history it is more common, but in only a few families is it directly inherited. Other possible risk factors are lack of schooling, history of previous head injury, depression and high blood pressure.

How common is it?

It is estimated that in the UK alone there are about three quarters of a million people with AD, and this will increase over the coming years. Under the age of 60 years the condition is rare, whilst as many as one in five of those over 80 years may be affected.

What symptoms does AD cause?

The early symptoms of AD are difficult to recognise. Lapses of memory and change in personality and mood are most typical. Sufferers may deny problems or find excuses for their mistakes. As AD progresses, it gradually damages more brain function.

Examples of common problems are:

- **Memory loss/forgetfulness and difficulty learning information.** The ability to store new information becomes more difficult and this leads to repetition, need for prompting, difficulty in adapting to unfamiliar environments and a tendency to mislay things - often described as a failure of "short term" memory. Old ("long term") memories are already in store and so are less affected until later in the illness.
- **Disorientation, initially in time** (e.g. mixing up the days of the week and losing track of time) and then in place (e.g. getting lost in unfamiliar surroundings, such as when on holiday).
- **Language problems** such as difficulty with word finding and less fluent conversation. There may be difficulties with understanding and with reading or writing.
- **Loss of ability to perform more complex and planned actions.** Initially this may involve activities such as driving and using electrical equipment, and later on tasks like using the telephone, making a cup of tea or getting dressed.
- **Poor perception, misinterpreting and not recognising common objects.** This may contribute to a tendency sometimes not to recognise close family or friends.
- **Impaired reasoning** and judgement and more rigid thinking.
- **Mood changes**, lacking emotion or seeming apathetic and depressed.
- **Changes in behaviour,** loss of confidence, increased irritability and tendency to become suspicious.

How is AD diagnosed?

The changes which occur in the brain were first described early last century by a German doctor called Alois Alzheimer. A definite diagnosis can only be made after death by detecting brain cell abnormalities (deposits of abnormal amyloid and tau protein) under the microscope. In life the diagnosis is based on the symptoms, and results of tests of memory and other mental functions. Other tests (such as a CT brain scan) may be helpful.

What treatment is available for AD?

Unfortunately there is no treatment to cure or to stop the progression of the illness. As in other types of dementia, the general management focuses on good medical, psychological and social care and support and education for the patient and family.

Are there any drugs which may help?

As a general rule any drugs prescribed should be supervised by a relative or a carer to ensure they are taken correctly.

- The anticholinesterase drugs, **donepezil, rivastigmine or galantamine**, are licensed for AD in the mild and moderate stages of the disease. They are effective in a number of patients by temporarily stabilising or improving some symptoms.

- **Memantine** is sometimes more suitable as first line treatment, or is added in as dementia becomes more severe. Treatment should only be initiated by a clinician with appropriate expertise.

- Sedatives and antipsychotic drugs are usually unhelpful in dementia, but may be prescribed, under careful supervision, when severe behaviour problems or hallucinations and delusions arise. Their use may hasten progression of dementia and cause serious side effects.

Where can you get information?

The ALZHEIMER'S SOCIETY publishes extensive information leaflets on the disease (telephone helpline 0845 300 0336). They also have a website at www.alzheimers.org.uk

www.alz.org the website of the American Alzheimer's Association which contains factual information on cause, management and latest research.

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