

information

MULTIPLE SCLEROSIS: A HISTORY OF THE DISEASE

Today, the medical profession is able to assemble an accurate description of the disease, multiple sclerosis (MS).

A PROFILE

People with MS will most often be:

- Women
- Caucasian, of Anglo-Saxon or Mediterranean background
- Living in a temperate region of the world
- Aged between 15 and 50 years
- Genetically predisposed to develop MS

SIGNS AND SYMPTOMS

The signs and symptoms that people with MS exhibit are many and varied.

Common *signs* which a doctor may detect during physical examination can include:

- Changes in eye movements
- Changes in speech patterns
- Changes in reflex responses and coordination
- Tightness and/or weakness in limb muscles

People with MS will commonly report these *symptoms*:

- Problems with vision
- Problems with walking
- Problems with bowel and bladder control
- Extreme tiredness
- Numbness and/or “pins and needles” sensation

DIAGNOSIS

The signs and symptoms are assessed together with a diagnostic test, most often Magnetic Resonance Imaging (MRI) of the brain. There is no single test which diagnoses MS.

A HISTORY OF THE DISEASE

The clinical picture was not always as clear, of course. This disease has been noted in medical literature only since the 1820's. There are two possible explanations of this phenomenon.

Firstly, MS may not be a new disease, but is a new concept. It may have existed as a disease for centuries before the first descriptions of it in the

1820's onwards in France and Britain. Medical knowledge may not until then have been sophisticated enough to assemble all the signs and symptoms and to construct a diagnosis satisfactorily. Evidence, however, suggests that this explanation is incorrect. [1]

Secondly, and perhaps more likely, MS is a new disease, beginning in the 19th century. The thesis regarded favourably at present is that European people may be genetically susceptible to MS and thus at risk from a virus that causes the disease to become active. This viral trigger is, as yet, unidentified. The geographic distribution of people with MS follows the trading and migrating movements of Caucasians, from Europe to North America during the middle of the 19th century, and colonial activity later in the century. (MS was first documented in Australia in 1886 by Dr James Jamieson). [2]

THE FIRST MS DIARY

The first written description of MS can be read in the diary of Englishman, **Sir Augustus D'Este**. In December 1822, when he was 28 years old, he attended the funeral of a friend and soon afterwards suffered an attack of what is known today as *optic neuritis*; his eyes recovered but four years later he recorded further vision problems. In successive years, he noted progressive weakness, numbness, difficulty in walking, painful spasms and depression – all part of the now-familiar MS picture. Although Sir Augustus, who died aged 54, was never formally diagnosed as having the

disease, “the meticulous notes in his diary seem to be enough for a posthumous diagnosis”. [3]

THE FIRST PATHOLOGICAL AND ANATOMICAL INVESTIGATIONS

In London in 1837, **Sir Robert Carswell**, the professor of pathologic anatomy at University College, published the first pathoanatomical description of MS.

In Paris at almost exactly the same time, **Jean Cruveilhier**, professor of pathologic anatomy, published a similar atlas. Cruveilhier's descriptions are extremely valuable because he included the clinical history of some patients alongside the anatomical depictions of autopsy findings. Cruveilhier, like Carswell, described small multiple lesions of “grey degeneration” in the spinal cord, brainstem and cerebellum. [4]

The first reasonably complete picture of MS emerged as the result of the research of **Jean-Martin Charcot** (1825–1893). [5] This French doctor was one of the great intellects of his century, a man whose mind impressed Alphonse Daudet and Marcel Proust, a man who read widely and deeply in English, German and Italian. He is honoured today as a founder of modern neurology. Amongst his achievements, he defined Amyotrophic Lateral Sclerosis and he advanced knowledge about some forms of Stroke.

Charcot's genius was to draw together the observations on MS (as it is now

known) made by Carswell, Cruveilhier and the German doctor von Frerichs, and to synthesise these findings with his own during the eight years he worked as physician to the Salpetriere hospital in Paris (1862–1870).

Charcot named the now-defined disease **le sclerose en plaques**, or **scarring in patches**.

THE TWENTIETH CENTURY

In today's terminology, **MS** means "**many scarrings**".

Despite intensive research during the last one hundred years and an array of hypotheses, the exact cause of MS is still unknown. Two questions which particularly interested Charcot are today very much under investigation: how the nervous system is damaged in MS, and how this damage produces the many and varied symptoms of the disease.

MS research currently involves many areas including the role of the immune system, the environment and genetics in the development of the disease. Our understanding of the underlying pathology is continuing to develop, leading the way to newer, more targeted therapeutic interventions.

Hopefully the mystery of MS will soon be solved.

REFERENCES

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