ME: A Muscle/Brain Disorder

Epidemics of Myalgic encephalomyelitis (ME) were reviewed by Acheson in 1959, and from 1934 to 1959 there were at least 23 well-documented outbreaks of epidemic proportions of a similar illness.

Many of the findings described by Acheson are very much relevant to our understanding of ME today. The disease was initially thought to resemble poliomyelitis until distinguishing features occurred; no patients developed the paralysis and muscle wasting seen in poliomyelitis, a disease of the spinal cord. In essence, Acheson described a systemic infectious illness characterized by marked muscle weakness (not paralysis); muscle pain, tenderness and swelling; and variable involvement of the central nervous system.

Henderson and Shelokov, in their review in 1959, also found that the affected muscles were tender either diffusely or in focal discrete areas, which felt "oedematous, doughy or rubbery in consistence". They also mentioned the association of behavioural disturbances with brain cell disorders such as cranial nerve palsies and hemiparesis.

Extensor plantar response was an occasional finding in some epidemics, clearly illustrated by Melvin Ramsay in his report of a series of sporadic cases in North West London in 1955/6.

Research funded by ME Research UK has revealed abnormalities in the function of blood vessels and blood cells. However, these have also been described in epidemics.

Infectious material was transferred from patients to monkeys during an epidemic in Adelaide, Australia in 1949/50. The only abnormalities discovered at autopsy were minute red spots along the course of the sciatic nerves, found to be localised collections of inflammatory cells which had also infiltrated the area where the nerve roots come out of the spinal cord.

Again, during the North of England epidemic in 1955, Andrew Wallis described findings in a patient in her 50s who developed the characteristic febrile illness, leaving her debilitated and emotional. During the next 15 months she continued to run a low grade fever with continued mental deterioration before she died. The post-mortem revealed small haemorrhages around blood vessels in the cerebral cortex extending into the mid-brain, considered to be the cause of her death.

Deterioration May Lead To Death

ME is a muscle/brain disorder which occurs as clusters of cases in families, in institutions such as hospitals or schools, and in specific areas, but also sporadically.

It is an infectious disease with an incubation period of 5 to 8 days. Acheson used the expression "in a greater or lesser degree" to describe "the symptoms and signs of damage to the brain and spinal cord" in this disease. This expression can also be applied to the febrile illness and muscle involvement. Many patients recover, while others have relapses with reactivation of features of the initial illness and further damage to new areas of the brain or muscles. In extreme cases deterioration may lead to death.

After activity, the recovery of muscle power is slower than in any other disease. The association between these findings in muscle and vascular and blood abnormalities needs to be explored. For research purposes, patients with these physical signs should not be coupled with those whose main illness is chronic fatigue on exertion without these signs.

This is a summary by Dr Neil Abbot of the review by DR J Gordon Parish, Patron of ME Research UK, titled ‘Reflections on The Clinical Syndrome Variously Called Benign Myalgic Encephalomyelitis,

Iceland Disease and Epidemic Neuromyasthenia by ED Acheson (American Journal of Medicine 1959', and available from the information section of ME Research UK's website: **www.meresearchuk.org.uk**