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Letter to the Editor

The Ludwig Guttmann lecture by Kakulas dt 20/10/04

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Professor Kakulas produced an excellent article drawing on his unique experience.[1] I worked with Sir Ludwig Guttmann at Stoke Mandeville intermittently between 1956 and his death in 1980 and I have reservations about the historical aspects of his lecture. He states in two different places on pages 550 and 555 that Ludwig Guttmann and Bedbrook were the pioneers. He recites the established view that Sir Ludwig Guttmann really founded the treatment of spinal injuries.

Initially, like Professor Kakulas, I believed that Guttmann had pioneered the modern treatment of spinal injuries and that prior to his work, all spinal patients died rapidly after injury from sepsis of the urinary tract and pressure sores. When I returned to Stoke Mandeville in 1962, although at that time I was aware that there were spinal units at the Veterans' Hospitals in the United States, I had always uncritically accepted that priority for the development of treatment rested at Stoke Mandeville, particularly because when Dr Ernest Bors (1900–1990), the leading spinal injury specialist in the Veterans' Hospitals, visited the unit in 1963 he paid tribute, describing Stoke Mandeville as being the Mecca of spinal injury work. This belief persisted until in 1969. At a meeting at the Ministry of Health held to discuss the setting up of additional spinal units in the United Kingdom, Harold Jackson Burrows (1902–1981) told me that the original work had all been done in the United States by Donald Munro (1889–1973) from 1936 onwards.[2] And this statement was reinforced by Watson-Jones'[3] comment that Munro was the real father of spinal injury work.

Stimulated by the teaching of Frazier, Munro set up an experimental unit for the treatment of spinal cord injuries, funded by the Rockefeller Foundation at the Boston City Hospital. He was the first to show and prove that spinal cord injury was not fatal but could be treated. He published extensively from 1936 onwards. His paper, written in 1943, laid the foundation for the modern treatment of spinal injuries. His views are dogmatic and forceful. He maintained that with meticulous care of the patient and prevention of pressure sores, and if the patient had a good pair of arms, he or she could be returned to a useful, independent existence.

The Munro doctrine is the cornerstone of modern treatment of spinal injuries:

> … no matter how extensive the paralysis may be in such a patient and provided only that he has full use of his hands, arms and shoulders, ambulation, with infallible 24 h control of bladder and bowel (without the need of a urinal or other artificial aid) – as well as that degree of overall rehabilitation that comes only with the ability to lead a normal social and work life within the limits imposed by the necessary use of braces and crutches – is well within the possibilities of present-day treatment.[4]

The texts that are quoted show what a superb, forceful, inspirational writer Munro was – a teacher and a prophet. His graphic descriptions of how the administration, nursing and medical staff should behave were very influential shown by the fact that Guttmann made 25 underlinings in his copy of Munro's book[2] and quoted Munro's work 10 times in a monograph.[5] In his early publications, Guttmann quoted Munro literally. Munro's views were widely adopted in the treatment of American servicemen during and after the Second World War. Munro's contribution to the treatment of spinal injuries was acknowledged in a review of the experience of the American Forces, which stated that most of the diagnostic and therapeutic procedures employed in Army hospitals had previously been tested in civilian clinics. Considerable space was devoted to Munro's methods of tidal drainage. The Second World War simply supplied the opportunity for their trial on a mass scale.[6]

Unfortunately, this was only being achieved in service hospitals. Munro tried to demonstrate that it was possible to treat and rehabilitate civilians from his unit, and in 1954, an end-result study was published of 445 cases cared for from January 1930 to July 1953.[7] With the exception of 15 veterans, they were all the victims of civilian accidents. The corrected overall mortality was 28%. There was a decrease in mortality from 47% during the 10 years from 1930 to 1940 to 20% from 1950. Munro stressed that:

> It is this improved therapy that is still usually not available in large numbers of these invalids. For it to be available and effective requires community interest and cooperation, enthusiasm and knowledge on the part of the local medical profession and, most important of all, education of the public so that they, as individual patients, will insist on their right to these essentials. The 27 additional lives that will be saved out of every 100 such injuries justify the effort.[7]

Munro acknowledged how expensive it was to treat spinal patients and described how the problem had been overcome by funding from the Liberty Mutual Insurance Company of Boston who had arranged to concentrate those patients they were responsible for at the Neurosurgical Unit at Boston City Hospital. Patients were seen by nurse counsellors and were treated by genitourinary consultants, all paid for by the insurance company. They had access to widespread facilities. The staff of the Medford Ambulation Centre provided corrective therapy at their own Rehabilitation Centre. Families were kept indoctrinated, patients were encouraged and opportunities for job training provided. When the patient was ready, arrangements were made for employment.

Rehabilitation led to healthy patients who could care for themselves, were able to lead active social and work lives and had regained their self-respect. For the insurance company, rehabilitation of spinal patients led to financial benefits in the long term because of a reduced need for care:

> The initial cost of rehabilitation is high, but any money properly spent initially is more than returned in later individual, community and governmental savings. For an expenditure of $223,089 on 26 spinal paralytics there was a net saving of $1,222,911, or 600%, on the investment.[7]

Munro concluded that the setting up of such a programme presented no problem, the humanitarian benefits were indisputable and the financial savings made it virtually mandatory.

The work of Donald Munro must be acknowledged as it was all carried out 8 years before Ludwig Guttmann was appointed consultant to the spinal unit at Stoke Mandeville Hospital and Guttmann freely acknowledged his debt in the early days to Munro.

Professor Kakulas refers to Guttmann's policy of early admission:

> … he insisted that all SCI patients be admitted immediately into his Spinal Unit. This policy was soon accepted worldwide commensurate with establishment of spinal units.

In the early days, Guttmann was unwilling or unable to treat the acute admissions.

In the United Kingdom, Watson-Jones stated that in 1955 Sheffield was receiving acute admissions and this was the solution for the optimum care of a spinal patient since they would not develop preventable complications. Holdsworth, an orthopaedic surgeon, was in charge of the acute orthopaedic unit at Sheffield infirmary and transferred patients at a later stage to Wharncliffe. In 1953, in a paper on the management of spinal fractures, he described 68 patients of whom 47 were treated from the beginning and emphasized that much better results were achieved by admitting the patients straight away.

> Bad initial treatment results in a host of other complications such as gross angulation of the spine, stiffness of joints, contractures and deformities, which seriously delay or even prevent late rehabilitation.[8]

This unit in Sheffield pioneered acute admissions Hardy, who was in charge of the unit at Wharncliffe from 1948, has confirmed this to me (Hardy A, personal communication, 1990).[2]

Guttmann (1954) emphasized that cases should be admitted early and I tried to determine how quickly after injury patients were admitted to Stoke Mandeville.[2] I went through the notes of the living survivors, representing only one in 10 of the original patients, and I could not find any acute admissions before the end of 1955. Guttmann recognized the vital need for the patients to come in early before complications had developed.

> The sooner the paraplegic can be admitted to a spinal unit or hospital equipped with all necessary facilities, the greater is his chance for speedy and complete rehabilitation.[9]

But he admitted that: 'The majority of paraplegics were admitted at later dates, following onset of paraplegia'.[9]

Finally, Professor Kakulas says of Guttmann: 'With the advent of National Socialism he left Germany for England in the 1930's'.

This is not correct. In 1933, he was expelled from his job with Foerster and worked for a further 6 years as a director of the Jewish Hospital in Breslau until the outbreak of war, when he escaped to England in the nick of time.[10] He worked in Oxford carrying out his research work until 1944. The circumstances of his appointment to Stoke Mandeville were that he impressed George Riddock who had been in charge of a spinal unit in the United Kingdom, but I have been unable to locate his letter of appointment despite much searching.

It is important to give credit where it is due and in this instance to acknowledge Munro's primacy.

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