

Correspondence

UGO CERLETTI 1877-1963

DEAR SIR,

Apart from an excellent appreciation in the *Lancet*, 1963, *ii*, 308, little notice has been taken in this country of the death of Cerletti, who died on 25 July, 1963, and so a brief account in your *Journal* of his life may be of interest to your readers. He had an original and inventive mind which he applied during his long life to psychiatry and its ancillary sciences. His work on electroshock was merely one of his many contributions to knowledge. In addition he was a man of the highest culture, and one of courage and determination both in war and peace. As an ally of Britain in the First World War he won an award for valour, while prior to the Second World War he was already in danger of his life through opposition to the Fascists. He was moreover a great admirer of the English way of life.

He came of an old Lombard family, his father being a prominent agricultural engineer and educationist. After studying medicine at Rome and Turin, he worked as a neuropathologist under Nissl and later under Alzheimer. Also working in the same laboratory at that time, though much younger, was the Scottish psychiatrist, D. K. Henderson. Cerletti's early work was in neuroanatomy, and a monograph beautifully illustrated in colour demonstrated that neuroglial fibres were not independent, as Weigert had thought, but were prolongations of the cell. He was the first to use silver impregnation for neuroglia. There followed endocrine studies in which he described how injections of whole pituitary retarded skeletal growth in some mammals.

He also contributed an important study on the cerebral vessels with their coils, nodes and plexuses. He was the first to describe senile plaques. Further, he suggested that the spirochaete was present in the brain of the general paretic, a fact which was demonstrated later by Noguchi. At the same time he gave a full description of congenital syphilis, demonstrating many symptoms for the first time. In addition he discovered a salt of mercury which was more effective than those used at the time, because it passed the blood-brain barrier.

For some years cerebral malaria and cretinism with endemic goitre claimed his attention, but thereafter he turned more to clinical psychiatry, publishing

papers on hysteria, on hallucinations experimentally produced in animals, and on toxic psychoses.

Most of the above work was carried out over a period of thirty years from 1895 onwards, when he worked first at Rome and later at the mental hospital at Mombello near Milan. In 1925 he was appointed Professor of Neuropsychiatry at Bari, and three years later he founded the now well-known neuropsychiatric clinic at Genoa, before going in 1935 to Rome to succeed de Sanctis as Director of the Neuropsychiatric Clinic.

In 1933 he began work on the epileptic convulsion in dogs. He applied an electric current in preference to a drug to produce the fit, as a drug might cause side-effects that could be confused with the symptoms of the convulsion.

The success of the treatments of Sakel and Meduna led him and his colleague Bini to try out electrically-induced convulsions in man. Cerletti has described how he observed pigs in the abattoirs in Rome. The pigs received an electric shock as an anaesthetic prior to having their throats cut. Although the shock generally caused merely a loss of consciousness, Cerletti observed that the shock often caused a major convulsion, and that if the pig were left alone, it recovered from the convulsion in a few minutes. It was ascertained also that there was a large margin of safety between the therapeutic and lethal strength of current.

Although it had been known for many centuries that some shock or application of stress to an insane patient could remove his symptoms, as by throwing him into the sea (ancient Greeks), spinning him round in a chair (Erasmus Darwin) or half drowning him (medieval monks) Cerletti was the first to give a stress treatment in which the patient did not suffer any discomfort, being unconscious throughout the procedure.

The first E.C.T. was given in April, 1938 in the presence of several colleagues including Bini, Kalinowsky and Flescher, the last two of whom later emigrated to the U.S.A. The patient, a hallucinated, deluded and grimacing schizophrenic, was able to return home after eleven treatments. Cerletti presented his findings to the Academy of Medicine at Rome in a joint paper with Bini, who had been responsible for the construction of the electrical machine.

Cerletti carried out fundamental research into the effects of E.C.T. during the subsequent twelve years and described his findings at the International Congress of Psychiatry in Paris in 1950. His main conclusions were that the treatment was cheap and safe and that there were many indications for it, including not only depression but also mania and most forms of schizophrenia as well as confusional psychoses.

Cerletti subsequently claimed that certain substances were found in the brains of animals which had been subjected to numerous electroshocks; this was based on the ability of such brain extracts to diminish the virulence of rabies and also, he asserted, a temporary feeling of well-being when injected into melancholic patients. This work however was not generally accepted. On one occasion when asked whether these "acrogonines" might not be merely hormones found in the brain and resulting from the stimulation of the pituitary by E.C.T., Cerletti answered that this was quite possible and he hoped that further work would be carried out to test the validity of this hypothesis.

Although his account of "acrogonines" did not find general acceptance, it has been generally agreed that E.C.T. has been the most valuable of all the physical methods of treatment in psychiatry and that it has relieved an immense amount of suffering. In 1948, at a meeting at Warlingham Park Hospital convened by the late T. P. Rees to celebrate ten years of E.C.T., many psychiatrists testified how the whole aspect of a typical mental hospital had been transformed by these treatments, as L. C. Cook later described in his Presidential Address to the R.M.P.A. in 1958.

Cerletti received many honours in recognition of his achievements. As well as being President of the Italian Psychiatric Association, and Honorary President of the Neurological Society, he received a special award from the Academy of Italy for his psychiatric discoveries. He received many honorary degrees abroad. He visited the U.S.A. in 1959 and in 1961 and travelled widely in that country.

He visited England in 1960 and met many of the leading psychiatrists. He showed an interest in improved techniques developed in this country from his own discoveries. He paid a pious visit to the Nightingale Museum at St. Thomas's Hospital, for he had done much to reorganize and reform nursing in Italy. He was enchanted by this first (and as it turned out, his last) visit to England. He showed the greatest interest in social conditions under the Welfare State and he said that he was impressed by the friendliness and good sense of the average citizen, "such as he had never encountered elsewhere". A

visit to an art gallery displayed Cerletti's knowledge of art. He recognized each painter by his works and he could give a thumbnail sketch of the life and characteristics of each artist.

In 1963 the West London Medico-Chirurgical Society decided to award him the Triennial Gold Medal for his distinguished services to medical science. Under the rules of the Award the medal could also be awarded for exceptional heroism in the discharge of medical duties. Cerletti qualified on both counts, for he had won the Italian Military Medal in the 1914 war. Other recipients had included Sir Ronald Ross who had discovered the life cycle of the plasmodium which causes malaria, Professor Neisser of Breslau, Sir Hugh Cairns and Sir E. C. Dodds. Cerletti wrote on 1 July, 1963 that he would arrive on 28 July. However within a few days he had become ill and he died on 25 July. He received the medal posthumously.

He leaves a widow and a daughter, and a son who is Professor Paolo Cerletti, a biochemist in Rome.

Yours faithfully,

A. SPENCER PATERSON.

2 Devonshire Place, W.1.

AMITRIPTYLINE AND IMIPRAMINE

DEAR SIR,

The findings of W. Browne, L. C. Kreeger and N. G. Kazamias (1963) in the September issue of the *Journal* under the title "A Clinical Trial of Amitriptyline in Depressive Patients" are very surprising, because they are not only contrary to the impressions and experience of most clinicians, but also quite out of keeping with results reported by almost all previous investigators. The literature up to the date of the appearance of the report by Browne *et al.* had been summarized by C. G. Burt *et al.* (1962) and by J. W. Garry *et al.* (1963). From these summaries it appears that amitriptyline, like imipramine, is quite effective in endogenous depressions (affective psychoses), but only marginally so in psychogenic reactions (which I presume is what Browne *et al.* mean by "reactive depression"). Their findings that endogenous depressions do not respond significantly better to amitriptyline than they do to a placebo is startling, so much so as to make one wonder whether a printing or other technical error had caused their two clinical groups of "endogenous" and "reactive" depressions to be switched round and so become linked to the wrong results. This would adequately explain not only their otherwise unexpected findings,