The close relationship between panic disorder and hyperventilation syndrome (overlapping with hyperventilation tetany) is well known but relatively obscure (Cowley & Roy-Byrne, 1987). Dyspnoea, shortness of breath, dizziness, trembling or shaking, paraesthesias, discomfort, along with apprehension or fear, nervousness, irritability are common to both affections.

Hyperventilation tetany is a consequence of alkalosis, yet a similar picture of tetany may develop in mild imbalance of magnesium or calcium. The locus coeruleus and potential alterations of the respiratory centres are involved in the pathophysiology of panic attacks or hyperventilation syndrome on the one hand, and a dysfunction of the mesodiencephalic part of the reticular formation causes pathognomonic carpopedal spasms in tetany on the other hand (Nevšimal & Roth, 1963; Hardonk & Beumer, 1979). We believe central nervous dysfunction participates in hyperventilation tetany (Kukumberg, 1991).

The present findings provide evidence for sustained increased neuronal excitability in panic disorder, and support the involvement of the limbic system and cortex in the genesis of panic disorder, according to the neuroanatomical hypothesis (Gorman *et al*, 1989).

COWLEY, S. D. & ROY-BYRNE, P. P. (1987) Hyperventilation and panic disorder. *American Journal of Medicine*, **83**, 929–937.

GORMAN, M. J., LIEBOWITZ, R. M., FYER, J. S., *et al* (1989) A neuroanatomical hypothesis for panic disorder. *American Journal of Psychiatry*, **146**, 148–161.

HARDONK, J. H. & BEUMER, M. H. (1979) Hyperventilation syndrome. In *Handbook of Clinical Neurology, Vol. 38*, pp. 309–360. Amsterdam: North-Holland Publishing Company.

KUKUMBERG, P. (1991) Side-specific electromyographic differences in tetany. *Lancet*, **337**, 1607.

NEVŠIMAL, O. & ROTH, B. (1963) *Tetanie und Zentralnervensystem*. Berlin: VEB Verlag Volk und Gesundheit.

P. KUKUMBERG
A. STREČKO

Department of Neurology
Dérer's Hospital
Limbová 5
833 05 Bratislava
Slovakia

CORRIGENDA

Journal, September 1993, **163** (suppl. 21), 46–54. The citation May (1990) should read Maj (1990).

Journal, September 1993, **163**, 415–416. The letter "Epidemiology of vascular dementia" was also written by Elizabeth Tym (Hinchingbrooke Hospital, Huntingdon) and Secundino López-Pousa (Hospital Sta, Caterina, Girona, Spain).

A HUNDRED YEARS AGO

The treatment of neurasthenia

Dr Constantin Paul contributes a lengthy paper on this subject to the "Bulletin Général de Thérapeutique," September and October numbers, 1893. His method of treatment is by hypodermic injection of an extract of the grey matter of the brain of the sheep. He bases his conclusions on a record of 53 cases, and upon an experience of this method of treatment of two years' duration. Nothing on the face of it seems more unlikely than that exhaustion of the body which seems more directly to depend upon an exhaustion of the central nervous system should be overcome by the use of an extract of the nervous tissues of an animal, but since the establishment of the use of the thyroid extract in the treatment of myxœdema, the mouth of the sceptic is stopped – observation alone is in place, and to that we must turn.

Dr Constantin Paul regards the organic liquid of the injection as a nervine tonic *par excellence*. Its first gift bestowed is a little sleep, which is chiefly characterized by its refreshing powers. The appetite is next awakened and the powers of assimilation. Prominent are its effect in strengthening the heart's action.

In the "Bulletin Général de Thérapeutique" for September 15th, M. de Fleury records 21 cases of neurasthenia in which he employed a complex therapy, including the hypodermic use of concentrated artificial serum, the effects of which are, he says, quite as marked as those obtained from the testicular and nervous juices. The neurasthenic dyspepsia he treats on dietetic and medicinal lines; the loss of sleep by a careful regulation of the day's routine; the pains and hyperaesthesias, etc., by statical electricity and dry rubbing. Rest, which he recognizes as excellent at the start, he replaces soon by regulated labour.

These statements are rather hard upon the grey matter of the brain, but we shall perhaps have to ask ourselves concerning this new treatment how much we must put down to the needle-thrust itself with the injection of *some kind* of liquid and how much to the *actual quality* of the liquid. That treatment by injection will have a much more potent *suggestive* action than treatment by milder methods is self-evident.

Reference

Journal of Mental Sciences, January 1894, 134–135.

Researched by Henry Rollin, Emeritus Consultant Psychiatrist, Horton Hospital, Epsom, Surrey

https://doi.org/10.1192/S0007125000049990 Published online by Cambridge University Press