Commentary

Neuropsychiatry – emerging from the mist

This case history is an exemplary illustration of how the development of modern neuroimmunological diagnostics can enable us to understand, classify and treat conditions in the borderlands of neurology and psychiatry. The delineation of the border between these two disciplines has an interesting and alternating history. Having had a large common arena in which the neurologist Sigmund Freud (1856–1939) established the basis for a new understanding of psychiatry, the disciplines have developed in different directions, where two quite different cultures have sometimes had problems in understanding each other's dynamics. The knowledge explosion in clinical neurobiology in recent years has again merged important aspects of the disciplines, so that today neuropsychiatry is one of the areas where our enhanced insight into pathophysiology means that «there are precise diagnostics and in many cases effective treatment» as the authors of the article put it. Suspicions of an organic cause can be confirmed with increasing frequency.

Encephalitis – inflammation of the brain – is a classic example of a neurological disease that is often accompanied by «psychiatric» symptoms such as behavioural changes, aggression and even delusions. It will often involve viral infections, the agents of which can increasingly be identified in practical clinical work with microbiological or immunological diagnostics. These infections are characterised by cerebrospinal fluid findings with a moderately raised total protein level (< 1.5 g/l), moderate pleocytosis and normal glucose level, as in the patient described. A PCR test will often be able to identify the specific microorganism. A pathological EEG pattern can be seen in 90 % of encephalitis cases in children, while diagnostic imaging is less sensitive (1).

Autoimmune encephalitis is less commonly recognised in an everyday clinical context, and will often be a sign of an underlying malignant condition, paraneoplastic encephalitis. The most common clinical pictures are limbic encephalitis, as mentioned by the authors, and brainstem encephalitis. The former is characterised by cognitive dysfunction, seizures and psychiatric symptoms, and lung cancer is identified in over half of these patients (2). An EEG shows pathological changes in all of them, and an MR scan shows pathological conditions in the temporal lobe in more than 80 %.

Treatment of autoimmune encephalitis depends on the underlying antibodies; in all cases, oncological treatment of the identified cancer is a cornerstone. For antibodies against intraneural proteins, T-cell suppression (cyclophosphamide, cyclosporine) is of prime importance, while steroids, intravenous immunoglobulin or plasmapheresis are recommended for antibodies against synaptic proteins, for which encephalitis with NMDA receptor antibodies is the best-researched variant (3). It is uncertain whether the improvement of the patient concerned in week 9 was an immediate effect of plasma exchange or a delayed effect of the treatment with immunoglobulin that was completed two weeks earlier. These forms of treatment are probably of equal value in terms of their effect. The authors do not mention which type of immunosuppression should be continued after initial treatment is completed, but azathioprine or mycophenolate mofetil are recommended (4).

In modern neurological diagnostics, MR has long since overtaken EEG for diseases of the brain other than epilepsy. However, this case history is a cogent illustration that functional examinations such as EEG still clearly have a role to play for encephalitis and other conditions where neurology meets psychiatry.

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