Editorial

Does a Neurology Department Need Its Own Intensive Care Unit?

K. J. Zülch

Max-Planck-Institut für Hirnforschung, Abteilung für Allgemeine Neurologie, and the Neurological Department at the Municipal Hospital, Köln-Merheim (Direktor: Prof. Dr. K. J. Zülch)

Received December 1, 1971

Key words: Intensive Care Medicine — Neurology and Intensive Care.


No doubt the reader will be surprised that such a question is raised at a time when some intensive care specialists are recommending a "reconcentration" of "decentralized" special intensive care units into one great Intensive Care Ward. Unfortunately, a "general" ward of this character could only be directed by a "super-specialist" who is sufficiently familiar with all the problems peculiar to the various specialties.

Such a proposition will certainly not be warranted in the foreseeable future and, therefore, the intensive care ward common to all specialties will be practical only for small and medium-sized hospitals (Haan).

In order to justify the demand for a special intensive care unit (ICU) for a neurology department one must first outline the goals of "intensive medicine" common to all specialties. These are:

1. To reestablish promptly the disturbed vital functions, i.e. treating the acute symptoms, in a patient threatened by a catastrophe.

2. To establish as quickly as possible the cause of the disturbance in vital functions.

3. To introduce rapidly treatment directed against the cause of the disorder.

In pursuing the first goal the methods employed by an anesthetist and a neurologist working in an ICU will not differ. However, in the very complicated process of establishing an etiologic diagnosis the situation will be different. Only the neurologist is sufficiently familiar with all of
the rapidly developing diagnostic procedures in his specialty to be able to carry them out at once and integrate the results into a clear understanding of one or several causes of the disturbance.

In what direction must he go at this stage of the procedure? He will try to obtain as rapidly as possible a pertinent history both of the acute episode and of previous diseases. This presupposes a thorough knowledge of the whole catalogue of possible neurologic disorders. An immediate neurologic examination must follow, its extent determined by the first impression of the nature and localization of the most probable underlying neurologic disorder. A prompt decision regarding the presence of increased intracranial pressure and/or shift of the cranial contents due to a mass lesion requires emergency diagnostic procedures, including echoencephalography, roentgenograms of the skull, and eventually emergency angiograms, careful cerebrospinal fluid examination and electroencephalographic recording from the bed of the patient within the ICU (either remotely by cable or directly from a portable EEG apparatus at the bedside). These procedures are often of inestimable value in determining the site and nature of the underlying process. By this plan of attack the neurologist will usually succeed, with the comatose patient, in distinguishing between a rapidly expanding neoplasm, cerebrovascular insufficiency, barbiturate intoxication, generalized metabolic disturbance or an epileptic process as a cause of the coma. Then after continuing prompt symptomatic therapy he can proceed to the determination of a specific etiology by employing radioisotope scanning and eventually four vessel arteriography. Additional information obtained from these examinations and from the necessary consultants provides a basis for the second phase of treatment, which will be directed at the cause rather than the symptoms.

Although this description of the various stages of neurologic diagnosis may sound quite ordinary to the neurologist, it establishes his claim for full responsibility in the intensive care program for the neurologic patient in order to achieve the second of the stated goals. In this leadership role, the neurologist will achieve far more with additional help from the anesthesiologist, internist and other required specialists than he could by participating as a consultant in a team, which is differently composed and directed.

Let us now examine the third goal of our program: has neurology already developed its own specific concept of medical treatment? or is symptomatic treatment still as poor as it was in earlier times in dealing with the various forms of acute and chronic syphilis including the so-called metasyphilitic diseases? To date no one will dispute the fact that the neurological clinic has come to its maturity not only in diagnosis but also in treatment.