

EDITORIAL

THE PROBLEM OF DEATH

Death as a phenomenon has figured prominently in human activity, for it is one of the greatest levellers of all animate things. The meanest insect and the mightiest emperor, the lowest worm and the wisest sage are without exception made to tread the one dark road leading to the grave. Nevertheless, it is pertinent to note that death as a physical state is ill-defined, for between the dead and the living, at the precise instant of demise, little if at all significant difference can be detected. The law accepts the death of a human being when it is duly testified by a competent authority, which is more and more becoming the sole prerogative of a licensed doctor, but the doctor has become more and more conscious of his inability to define death precisely. Until the advent of artificially induced heart beat, and assisted respiration, the medical men have been content to accept death when the last gasp is made and the weary heart comes to rest. Medical jurisprudence has taught, and in fact is still teaching in most cases, that a cessation of respiration and heartbeat for five continuous minutes would constitute death. The fact that respiratory activity can be mechanically carried on for days or even months after spontaneous arrest, and the cardiac rhythm can be regained by pacing in the large majority of cases of arrest, upsets this pronouncement of the end made with great confidence over many years.

The value of a recently dead body in providing spare parts such as cornea, bone, arteries, kidneys, heart and lung accentuates the awareness of doctors about this unhappy state of affairs, for death has to be pronounced before the parts of the body can be taken for donation, and donor's tissue is of scant value if taken in most cases too long after death has come. The civilised world and the medical conscience would be aghast if in the attempt to supply spare parts to support a weakened existence, a living one, even though in a precarious state, has to be sacrificed. Yet in most cases of donors of kidney and heart, the dead bodies have been in fact breathing and are having heart beats, induced artificially no doubt in most of them, but spontaneous still in at least a few of the reported cases!

Hence it has become a pressing problem to define death, as otherwise an overzealous surgical team would in fact be terminating one human life in order to prolong another, and a more hesitant one would find that the occasions for obtaining satisfactory donor's tissue very few and

far between. So far, the major policy pronouncements of most centres seem to labour the fact that death of a person is distinct from molecular or even somatic death, and that the presence of heartbeat or respiration even if spontaneous at times need not mean life is still present. Stress has been made on cerebral death suggesting that it is only when there is irrevocable evidence of a total cessation of brain activity over a period of time that death has occurred. The French in fact advocated that when no electro-encephalographic activity could be elicited for 24 continuous hours in the absence of spontaneous respiration and in the presence of an unregistrable blood pressure, the person could be regarded as dead. Recent statements from interested centres have become more permissive, and at least one has suggested that absence of brain activity alone should be sufficient although it is careful to say that exceptions must be made in cases of profound drunken states!

However, it is clearly insufficient to regard human death as cerebral death, for the human life is not just cerebrum, cerebellum and brain stem alone. There are sufficient studies to show that after decapitation, a head can be kept alive for a long time by cross circulation, although it survives in isolation as a head only. Are we to believe that this isolated "living" head is life, and for that animal, or human being as the case may be, death has not yet come, even though the rest of the body from the neck down may have returned to dust? Clearly, the seekers of the definition of death have, in their desire to come out with a speedy answer, tumbled into the erroneous path of the previous generations of neurologists and neuro-physiologists who were busily engaged to look for centres for various human activities in the brain, that even the seat of the soul was not overlooked!

The presence or absence of cerebral activity may be, and I am sure, will be, an important factor in deciding death, but a living brain, like a living heart or kidneys, is not life as we know it, and cannot constitute the sole distinction between the states of life and death. It is granted that a workable definition is urgently needed, but the need for anything is no guarantee that there must be such a definition in existence. Death has to be defined, but in our present stage of knowledge, the definition is likely to remain elusive and controversial for some time to come.

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