Reactive States Following Strokes*

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I would like to present some observations made over the past three years in the Stroke Study at Bellevue Hospital. I am going to limit my remarks for the most part to the problems of patients with residual motor deficit but with no enduring diffuse cerebral dysfunction. These observations were made on 94 patients who fulfilled these criteria and where verbal exchange was possible.

First a word about the clinical population. The age range extended from the 4th to the 9th decade with the heaviest weighting in the 6th and 7th decades. With few exceptions they are people who have lived most of their lives at a lower socio-economic level. Many were immigrants to this country. Not very many had either completed or gone further than a grade school education. Among the men, close to half had either married or had unsuccessful marriages. Work histories were often sporadic. Except for an occasional artisan or professional most of their productive years had been spent at unskilled labor. A higher proportion of the women had been married. The fabric of their lives was generally a more consistent and stable one than in the case of the men.

Before considering the post-stroke situation and the adaptive processes involved, let me sum up; the modulating influences of the aging process itself in an effort to assess the resources of these patients as they encounter this type of stressful situation. Briefly, this may be distilled down to a few prevailing trends. We are dealing with a population where, by and large, the sources that trigger off neurotic conflicts earlier in life, such as sexual needs, family adaptations, competitive social pressures, or simply the ordinary obstacles in the lonely and sometimes tortuous path toward self-realization, have receded into the background. This is not to imply that personality limitations do not continue to operate, but they do so now in a life situation which is qualitatively different than in earlier stages. The transactions have become stabilized, however severe the distortions that may enter the picture. They have become limited. They have become more related to basic necessities. These patients are more involved in a present and a past orientation than in a future orientation. A corollary to this pertains to the importance of the supportive aspects of the environment. Along with the aging process there is a subtle transfer of the center of gravity of security operations to stable, predictable environmental responses, regardless of whether this occurs in relation to inanimate objects within the four walls of a hotel room, or in a more complex family milieu.

Our initial concern was to obtain as complete a statement as possible about the occurrence of the stroke as it was subjectively experienced by the patient. This proved to be of interest for several reasons. The reactions expressed were very

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revealing of the range of the resources as well as the personality limitations of the patients. Courage, self-control, patience and acceptance were perhaps the rule rather than the exception. Idiosyncratic attitudes towards illness, handicap, helplessness or death were directly or indirectly revealed.

The following accounts typify the common tendency to rationalize the initial symptoms:

“I got up to go to the bathroom. I laid down again. In the morning I could not move. I see the hand don’t move. I rub myself. In the coffee house a fellow sees me and sends me to the hospital. I was paralyzed, but it was so little I thought it was because of an old burn 10 or 11 years ago.”

“I woke in the morning. I tried to get out of bed. All of a sudden I was half paralyzed. I managed to walk downstairs. I wanted to cross the street and get something to eat. I could not think of anything. I thought maybe it was a cold settling on my spine. When I talked to people they looked at me in astonishment. There was something wrong with my speech.”

Stoicism as a defence is illustrated in the reaction of the next patient:

“I noticed my hand did not move . . . I noticed a little trouble with my foot. I noticed my tongue wasn’t working right . . . I was strong like an ox—all of a sudden I fell down on the floor. I could not move . . . I wasn’t frightened—I wouldn’t know what it is to be frightened. I figured it this way, if I get well I’ll know what happened to me. Otherwise I wouldn’t know.”

The early outlines of what later developed as depressive, paranoid or denial operations could often be discerned in these initial responses. Later reactions were forecast by tendencies to either maximize or minimize the effect of a new life situation and one characterized by rapid changes in its physical, psychological and social dimensions. Efforts at preserving the sense of personal inviolability were manifest either through staunch stoical attitudes or through evasions, rationalization and implicit denial. At the other extreme and less often, patients displayed mounting apprehensiveness and heightened dependency. In the former instance initial attitudes toward hospitalization and dealings with nursing and medical personnel were negatively tinged; in the latter there was a receptivity toward the medical support available and the ensuing transactions with medical personnel carried a positive tone. There were other interesting aspects of the subjective reactions that pertain to the unique descriptions patients gave of similar sensory and motor deficits.

The following are the initial reactions of a 56-year-old male immediately following the occurrence of a right hemiparesis. The diagnosis was thrombosis of the left middle cerebral artery. He was at work as an elevator operator when his leg began to give way. He managed to get to a chair and then noted the following:

“My eyeglasses seemed alive in my right hand. I could look at it in a stupid sort of way but had no control over it. It seemed as if the glasses had become an animal or a crab. The only time I really got frightened was when I couldn’t control my right hand, then the glasses appeared animated.

**COMMENT**

This transitory illusion involving the eyeglasses is of a type that is occasionally associated with the sudden loss of motor power and the simultaneous occurrence of sensory changes in a limb. The movement of an inanimate object inadvertently by the involved limb appears to originate from the object itself as its relation to the limb and the connection of the latter to the self is not immediately perceived.

Another patient gave the following interesting account of the onset of a hemianopia:

“While I was walking to the hospital a hole came into my right eye. Everything seemed to be coming into it. Things went into the hole and then stopped. I don’t notice it now but it was like a round hole in the right side. Things disappeared into that hole. Now wasn’t that strange? You’d think I’m crazy!”

The evaluation of the patient’s behavior at this initial stage has to take into regard the fact that the patient is confronted with a situation that has the following characteristics:

1) It is new and relatively unfamiliar
2) It is rapidly changing
MONTAGUE ULLMAN, M.D.

3) The full import and meaning cannot be readily grasped in the initial stages.

What we observe through the medium of the initial subjective account is essentially the impact of a suddenly arising stressful event perceived with greater or lesser clarity as potentially catastrophic upon the momentum of the premorbid personality and life style. The three possible directions the patient can move in are toward realistic integration, resignation or denial. Which he chooses, whether to struggle realistically and attempt to come to terms with his new life situation in a way that ultimately enhances his stature as a person or struggles unrealistically through techniques of hopelessness or denial is at this stage a function of his habitual mode of responding to stress. The new elements in the situation are too overwhelmingly new to be fully absorbed and hence do not yet elicit any qualitatively new adaptive responses.

**REACTIVE STATES**

I would like to move on now toward a later stage, perhaps three or four weeks after hospitalization, when the situation is more known and appreciated by the patient. It is at this time that any one of a number of reactive states may be noted. I wish, however, to focus on only one such state, namely, that of depression as it constitutes by far the most frequently occurring manifestation.

Occasionally a reactive depression occurs which in its format is similar to reactive depressions occurring in other contexts. There is a manifest provocation in the life situation. The patient responds not only to this, but also to the symbolic connections of the current situation to an earlier and unresolved conflictual situation. The result is an over-reaction in the present along the lines of guilt, self-reproach and feelings of futility.

**CASE 1**

The patient, a 65-year-old white female, was admitted to the hospital following the sudden onset of a right hemiparesis. The latter cleared within two weeks following admission. The discharge diagnosis was thrombosis of a branch of the left middle cerebral artery.

In the initial interview the patient was somewhat reticent about divulging information concerning her past. She was a well-groomed, pleasant and articulate woman who appears younger than her stated age. For the past 15 years she had worked as a supervisor in the mail department of a large New York hotel. She is the second of four siblings. A younger sister had died of a heart attack 12 years before. The patient was married in 1914 but separated three years later. Her husband died six years ago. They did not get a divorce nor did he continue to support her. She denies having anything to do with any other men following the separation. She had a hysterectomy in 1940.

When seen again two weeks following the onset of her illness a depressive affect was noted despite the rapid recovery she had made. She was encouraged to talk about herself. After some persistence on the part of the examiner she suddenly began to cry and revealed the fact that at one time she had had a 4+ Wassermann and that this was preying on her mind. This was first discovered in 1922. She had contacted syphilis from her husband. She felt certain that in some way it was connected with her present illness, this despite the fact that her serology had been negative for many years. She would not give any other details about her marriage other than to indicate that she and her husband had been unhappy together. She made repeated references to the Wassermann test indicating this had been a blight upon her existence and that the stroke had occurred as a kind of punishment. Subsequent interviews were characterized by tearfulness, expressions of guilt, self-derogation and references to herself as a “typhoid Mary.”

**COMMENT**

The stroke, in upsetting the smooth routine of a circumscribed but satisfying way of life had shaken her defenses and opened up old wounds. The adaptation through guilt and fear of punishment, painful as it was, enabled her to temporarily by-pass the full implications and reality of her present illness. The depressive affect did not lift until she was once again able to resume her former work regime.

More characteristic among the stroke patients, however, particularly those with moderate to severe residual motor deficit is the slow and gradual evolution of a
depressive affect, sometimes sub-clinical in intensity and not infrequently unrecognized initially by the patient himself. The situation is akin to a prolonged state of mourning made interminable by the fact that what has been lost can never be restored. It is the inexorability and finality rather than the intensity which is the outstanding feature of this response. In contrast to the patient with a reactive depression who, despite his avowed feeling of hopelessness is actually reaching out into his environment for help at an interpersonal level, these patients do not appear to send out distress signals or actively seek help. There is no denial of the depression. There is simply acceptance of it. It is an accurate reflection registering at some level of conscious awareness the failure and limitations of one’s resources in coping with the developing train of events.

CASE 2
Patient is an 83-year old white male who experienced a transitory left hemiparesis. Diagnosis: Thrombosis, right middle cerebral artery.

When first seen, the patient was alert, responsive, eager for contact and looked and acted younger than his age. He was born in Hungary and came to this country alone at the age of 16. The quality of his existence is best expressed in his own words:

“I came here alone at the age of 16 and I went to school to learn English. They started me off in a cigar-making factory. I didn’t work there long, maybe three or four years, and then I said to myself, ‘This isn’t the life’. They paid me poorly. There was no future and my family didn’t help me out. They were poor and ignorant. I was very good at that work. A big concern gave me a job. They taught me how to be a foreman. I worked there over ten years. The girls looked up to me. I was a nice-looking fellow and young. I liked to keep company with girls but not to get married. I didn’t make enough money. My ambition was to settle down on a solid foundation. So I didn’t really live. I didn’t want to get married like an ignorant fool. When I needed a woman I paid her and then good-bye.”

He spoke of his retirement ten years earlier with regret. “I don’t like it. I can’t bring back the young years. I look for a job and they laugh at me because of my age.”

He described his reaction to his illness: “I didn’t think I was going to get sick like this. I can’t walk. I can’t use my arm. I’d like to go home, go to sleep and never wake up. I don’t mean I would ever kill myself. I’ve just overleased my time.”

The hemiparesis cleared in the course of the next two months except for some residual weakness in the left upper extremity. Despite this, there was a general deterioration in his physical condition. He presented multiple somatic complaints, some of which, on investigation, proved referable to osteo-arthritis of the cervical spine and poor circulation in both lower extremities. He ate and slept poorly. He was transferred to the rehabilitation service but felt too weak to participate in any organized program of activity. He became increasingly depressed and voiced his dissatisfaction with himself, his surroundings and the ward personnel. He began to lose hope of ever leaving the hospital when a brother upon whom he was counting to arrange for his care left the city. He refused to consider a nursing home or any other placement. He gradually became completely bedridden and died seven months after his admission to the hospital. Autopsy revealed severe generalized arteriosclerotic changes.

COMMENT:
At the time the stroke occurred the patient’s existence was in a state of precarious balance both physically and emotionally. From the physical point of view, the causative factors accounting for his death existed for many years before the stroke, to the point where the degree of reserve in his vital organs was almost depleted. From the psychological point of view, his relatedness to his surroundings had grown very tenuous and his sense of usefulness to himself and to others had been considerably undermined since his retirement. The stroke was, in effect, an incidental occurrence which simply served to expose and accentuate the underlying deteriorating processes at work. At some point there was an intuitive realization by the patient that this was the case. The struggle to live was renounced and the depression came into the picture as an ef-
fort by the patient to cooperate in the process of dying.

In patients who get well enough to leave the hospital the depression appears to exist in parallel with the general capacity for day to day living. What the patient does or does not do may influence but does not eliminate the depressive core.

The significant point about this type of adaptive failure is that it derives from difficulties that are not primarily psychological in nature but relate essentially to the real inability to reverse or compensate for the drastic physical and social changes ensuing in the wake of the stroke. Effective therapeutic intervention may limit but not eliminate this type of depressive reaction.

What can we say generally about the factors influencing the patients' response at this time in the disease process? The nature of the disease and the toll it has exacted have now come into focus. But so have certain new elements. These include:

1) The actual process of recovery
2) The witnessing of recovery by other patients.
3) The attitudes of medical personnel.
4) The effectiveness of the medical regime.

It is in response to these factors that new modes of adaption may or may not come into the picture depending on the openness, the flexibility and the latent potential of the patient, all of which are most in evidence in this initial four week period. There exists no rule of thumb for predicting the outcome. Perhaps the surest guide is the patient's capacity for meaningful and enduring relatedness to an idea, an activity or a person as revealed in his past history. At any rate this is the stage during which whatever personality reorganization is apt to take place does take place and hence it is the stage of greatest receptivity to outside intervention. A test situation exists in which the environment may or may not succeed in meeting the patient's need for support, stability and consensual validation concerning progress and the possibility of a hopeful outcome.

Post-Hospitalization Phase:

As a final point I wish to call attention to a few pertinent observations noted during the follow-up period:

By and large, the patients who have no enduring diffuse cerebral dysfunction and who have been transferred to the Rehabilitation Service have reacted appropriately to the program as a reasonable and necessary learning experience. They are able to make the connection between the laborious techniques of muscle retraining and the projected needs of their own future existence. Once this connection is made an array of problem-solving resources comes into play. Without it considerable potential may lie fallow. What I have to say now applies to the patient who cannot make the connection either because of some measure of mental impairment or as a result of motivational deficiencies associated with personality limitations and/or a poor life situation.

The future course of this type of patient is determined by the elements in the life situation to which he is returning rather than by the degree of mobilization of any new adaptive facilities resulting from the hospitalization experience. He has moved from a situation in which, to him, the emphasis has been on physical rehabilitation out to an environmental situation the most important aspect of which are the new and unexpected social demands that lie in wait. From the patient's point of view it is as if he has been subjected to a strenuous program of physical re-education and retraining without any clear concept of, or felt response to the link between such retraining and the actual remaining sources of gratification open to him socially. Perhaps, in regard to this type of patient we have brought into the rehabilitation process a stereotyped concept of doctor-patient relatedness where each aspect of the patient's disorder is noted, evaluated and prescribed for, whether the deficit be in the physical or psychological sphere. This, however, tends to blur a qualitative distinction between meeting the needs of a patient in combating a disease process and meeting the needs of a patient in combating an adverse life situation. In the former instance the patient is apt to respond to the activities of the physician regardless of how the situation is interpreted by the patient. In the latter the situation as viewed by the patient pow-
erfully influences the ministrations of the physician. The important corollary to this is that the success or failure of physical rehabilitation is contingent upon the degree of involvement of the patient in the task at hand, that is the meaning of the task to the patient and this in turn is related to the immediate and concrete application the patient can make to an immediate and continuing source of gratifying activity. This shifts the emphasis to the primary task of social involvement at whatever level this is possible with physical rehabilitation facilitating movement in this direction. The needs of these patients are similar to the needs of people generally—to be active, to feel competent and to engage in meaningful transactions with other people. I wonder to what extent the rehabilitation process as it now exists in practice in relation to this specific group does not unwittingly reinforce the patient's own sense of discontinuity with life about him. One of the first things any psychiatrist learns is that until he can actually see the world as the patient does he cannot begin to help the patient. The rehabilitation team is called upon to do this and something more. They are also called upon to restructure the environment in terms of the patient's needs. I say this with due regard to the advances being made in this direction by total push programs and the concept of the team approach. But I do believe that a further and qualitative change has to follow, a step perhaps analogous to the sheltered workshop, but where the concept of shelter provides considerable room for patient autonomy and where the concept of a workshop is extended to a total program for living.

In the absence of this type of resource what has tended to occur in the patients observed in the follow-up clinic is that old patterns reassert themselves. The patients, now no longer members of a captive audience, once again become either medico-philic or medico-phobic, depending on whether they are trying to push the whole experience behind them or seek to exploit the situation in the service of dependency needs.

There are only two ways a patient can rise to the occasion and regain a positive orientation to life. He can find the resources within himself with an assist from the outside or he requires a rather large scale type of social prosthesis to effectively regain a lost equilibrium. Until we are able to provide him with that we will continue to look in vain for that mysterious entity known as motivation somewhere within the ectodermal boundaries of the patient and never quite find it.