Senile-Presenile Dementia: Follow-Up Data on an Effective Psychotherapy-Anticoagulant Regimen*

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ABSTRACT: This report contains follow-up data on the effects of an anticoagulant-psychotherapy regimen in presenile and senile dementia. Over a two-year period, 49 such patients who were seriously ill were treated with a Coumadin-psychotherapy regimen; 34 (69 percent) improved (4 of them dramatically) and 15 (31 percent) did not improve or became worse. The underlying pathologic processes are discussed, with the rationale for therapy.

In 1968-69 the senior author (ACW) reported on the use of anticoagulant therapy in the treatment of senile and presenile dementia (1, 2). Also discussed was the proposition that these diseases, as well as organic dementia due to arteriosclerosis and several other similar syndromes, have the same cause, i.e., cerebrovascular insufficiency. Brain ischemia as a fundamental factor in dementia has been even more firmly established by our continuing success with treatment (3). Additional support is provided by the numerous reports in the literature that indicate the various ways in which the brain can be deprived of blood. The most fundamental of these studies is that of Hutchinson and Yates (4), who pointed out the importance of the carotico-vertebral system, long overlooked by pathologists and clinicians. Next in order come reports on the effects of venous thrombosis (5) and of various vascular anomalies.

Important, and also neglected, is the factor of blood sludging (erythrocyte aggregation), a phenomenon so brilliantly and painstakingly studied by the late Professor Knisely (6). Stenosis of an artery causes slowing of the blood flow, which results in reduction of the shearing forces. This permits the erythrocytes to form aggregations, and these impair the blood flow distal to the stenotic area. Knisely also pointed out that diabetes and alcohol (among many other factors) may cause blood sludging and this explains why brain damage is more common in association with diabetes and alcoholism. It also explains why brain-damaged patients with these two disorders often respond better to treatment than do other patients — there is more sludging for the anticoagulant to attack. This theory is supported by a study of 15 alcoholic brain-damaged patients; 12 responded well after all other treatment methods had failed (7).

PSYCHOTHERAPY

In our 1968 paper, the emotional factors in dementia were discussed only briefly. Since then, more attention has been paid to psychologic trauma, both as cause and effect. Severe emotional stress can induce strokes and angina. The famous London surgeon, John Hunter, said he was at the mercy of any rascal who chose to make him angry; and, indeed, he did die of a heart attack brought on by an argument at a clinical conference. Furthermore, such expressions as "livid with anger," "pale with fear," and "the blood froze in my veins" doubtless have a physiologic basis and refer to effects caused not only by vascular spasm but also by sludging of the erythrocytes. Sludging may develop through two mechanisms: 1) constriction of the vessels, which
slows the blood flow; and 2) extra production of adrenalin, which increases the clotting tendency. Sludging probably is a prethrombotic stage. Therefore, we now pay much more attention to these psychologic factors in our therapy program.

Even if a particular case of dementia is not brought on by emotional stress, the very presence of the dementia creates tremendous stresses in the patient and his family. Anyone who has had experience in caring for patients with organic brain syndrome knows what a trial their caretakers endure because of the patient's paranoid anger, restless anxiety, repetitious requests, frustrating forgetfulness and infuriating insomnia. The exhausted relatives eventually reflect their anxiety and frustrations back onto the poor patient, who is equally disturbed by the persistent symptoms. Thus is created a vicious cycle which ends only in the patient's death or his admission to an institution. The latter often increases the patient's anxiety and confusion and also may produce guilt and financial stress for the relatives, to replace their previous caretaking woes when the patient was at home. To keep these seriously disturbing factors to a minimum, psychotherapy is used with both patients and relatives, as it helps them cope with the emotional stresses which can become quite severe.

The approach to psychotherapy involves interviewing the patient and the relatives (or other caretakers), separately and together, at each session. The material discussed and the technique used must vary with the individual circumstances, with the varying receptiveness of the involved persons, with the stage of the treatment program, and with other unpredictable factors such as the occasional complications of anticoagulant therapy. Although these complexities call for great flexibility on the part of the therapist, there is a basic standard approach. The usual life history and family history, so important in psychiatry, is obtained in the most appropriate manner for each patient, but usually by gathering the information from both him and his relatives. This is important to the understanding of the patient and the family and their reaction to the illness. When the patient is interviewed by himself, he is encouraged to review his life — a method elaborated by Butler and Lewis (8). This technique not only helps the patient come to terms with the past but also stimulates brain cells that are still alive but not functioning. As the circulation improves we expect these cells to resume functioning, and life-reviewing is the mental-exercise equivalent of the physiotherapy used to strengthen arms and legs after the motor areas of the brain are damaged by a stroke.

When the relatives are seen apart from the patient, they are given the opportunity to express their frustrations and fears, thus allowing emotional release and the opportunity to restructure their lives as needed. This requires tact and skill, for many of these people resist psychologic help. Gradually the relatives learn to understand the patient's illness and their own reactions to it, and this reduces their depression and hostility, previously often unrecognized. When patient and relatives are seen together, mutual problems are dealt with in a tactful way at appropriate times. These problems are resolved by the best means possible, rather than being allowed to fester and increase inner tensions. Varying amounts of free association, "working through," and directive therapy are required with each set of patient and relatives.

ANTICOAGULANT THERAPY

Since the 1968-69 papers the anticoagulant has been changed from bishydroxycoumarin (Dicumarol) to warfarin sodium (Coumadin) because the latter is easier to control and most doctors are familiar with its use. This makes transfer back to the local physician easier for both patient and doctor. So far, the results of treatment with Coumadin appear to be as good as with Dicumarol. However, this must be confirmed by further study, because the various anticoagulants do not have exactly the same actions.

RESULTS OF PSYCHOTHERAPY—ANTICOAGULANT REGIMEN

In July 1976, the results of such therapy in a group of 49 patients treated over the preceding two years were tabulated. It should be emphasized that nearly all of these patients had been previously treated elsewhere to no avail and had entered our treatment program as a last resort. They were thoroughly investigated either before or after we saw them; they underwent most of the usual tests including computer axial tomography (CAT) scans and neurologic consultations. Many showed extreme deterioration. One woman had complete brain blindness and was waited on hand and foot by her husband; others were unable to carry on even a semblance of normal conversation. Most were treated as outpatients because hospitalization often upsets confused and disoriented persons and may result in their be-
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coming bedridden unless they can afford special nurses to control their behavior and thus avoid the need for sedation and restraints.

Nevertheless, 69 percent of these 49 otherwise hopeless patients improved (14 percent dramatically) so that they were able to function almost or even totally on their own. Improvement was classified as +1 to +4, with +4 being dramatic, and +1 slight. The degree of improvement was assessed by us according to the patient's symptoms as observed by us, and as reported by relatives. Years of experience have led us to conclude that there is no more accurate or realistic way of classifying improvement. The opinion of the relatives (in effect, the "consumers") is important and scientifically valid since they live in close contact with the patient, know his previous condition, and can detect subtle changes sometimes not noticed by other observers. If the relatives see no improvement, then improvement registered on a complex rating scale means little from a practical point of view.

The statistics on the 49 patients were as follows:

<table>
<thead>
<tr>
<th>Improvement</th>
<th>No. of Patients</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>+4</td>
<td>7</td>
<td>(14.3%)</td>
</tr>
<tr>
<td>+3</td>
<td>10</td>
<td>(20.4%)</td>
</tr>
<tr>
<td>+2</td>
<td>9</td>
<td>(18.4%)</td>
</tr>
<tr>
<td>+1</td>
<td>8</td>
<td>(16.3%)</td>
</tr>
<tr>
<td>No change</td>
<td>2</td>
<td>(4.1%)</td>
</tr>
<tr>
<td>Worse</td>
<td>9</td>
<td>(18.4%)</td>
</tr>
<tr>
<td>Died</td>
<td>4</td>
<td>(8.2%)</td>
</tr>
</tbody>
</table>

The results were not as good as in the last reported series of 24 patients, when all 22 survivors showed improvement (9). The reasons for the poorer results are not as yet clear. Was it due to changing from Dicumarol to Coumadin, to inclusion of more seriously ill patients, or to other extraneous factors? Extraneous factors accounted for most of the 4 deaths. One patient fell and broke her hip; another fell down a flight of steps and fractured her skull (totally helpless with brain blindness); another deteriorated after his physician stopped anticoagulant therapy because of bladder bleeding, and pneumonia developed following transfer to a nursing home; the fourth had a stroke and died within 48 hours. In this age group and with such seriously ill patients, some deaths are to be expected.

Because of the previously observed almost consistent improvement with such therapy, it was surprising that a surviving 22 percent of the 49 patients in this series remained the same or became worse. They may have sustained too much irreversible brain damage to begin with, but this should not account for their continued deterioration. Perhaps Dicumarol is more effective than Coumadin for some patients. In some instances we felt the family was not able to give enough support. For example, two husbands were aged themselves and could not properly cope with their wives' incontinence, combative-ness and insomnia over a long-enough period; also the patients needed more sedation than the usual optimal dosage. Undoubtedly, other factors of which we are not yet aware helped to account for the lack of response in these patients. However, it should be kept in mind that merely not to improve may represent some benefit from treatment, since the patient might have continued to deteriorate if left untreated. In some patients the only practical goal might be to arrest or slow down further deterioration, e.g., to prevent the development of urinary or fecal incontinence. This effect was shown in a previously reported series of 13 patients, when 3 of them who had been stabilized died within a week after the anticoagulant drug had to be discontinued (1).

It was surprising to find that some of the seemingly poor-risk patients (several so deteriorated that we hesitated to treat them) responded more satisfactorily than did others who seemed to have a better prognosis. One 81-year-old woman from Ohio was so weak she had to be lifted in her arms for comfort and was totally disoriented. After treatment she wrote a note of gratitude in her own handwriting and was able to discuss her severe illness and other problems sensibly; she put away the stuffed dog forever. Another patient from Florida was so belligerent at first that he would scarcely agree to sit down in the office. A year later he was cooperative and pleasant, and was easily cared for by his wife. He played shuffleboard and required no sedation but still took Coumadin under the supervision of his local physician. At the follow-up office visit, he chatted amiably.

A satisfactory result often depends upon the cooperation of the relatives, so they are instructed very carefully in the proper method of dealing with the patient's particular problems. They are also instructed in how to handle the anticoagulant therapy, just as patients and relatives learn how to handle insulin in the treatment of diabetes. They learn the proper level for
the prothrombin time, the use of vitamin K-1, and what to do in case of bleeding complications. Sometimes, though, the patients are better able to handle these matters than are the relatives (circumstances being so variable), but it is always advisable for a relative or close friend to be involved, in case the patient should become sick or less competent.

DISCUSSION

The psychotherapy-anticoagulant regimen for patients with organic brain syndrome due to arteriosclerosis or with senile/presenile dementia continues to yield promising results. For instance, in August 1976 we examined a 55-year-old woman; after 2.5 years of treatment, Coumadin and tranquilizers had been discontinued and she appeared to be "cured." She may have a relapse, but at the moment she is still improving.

Why some patients do not respond is not yet clear, but since the majority do improve significantly it would seem logical that a patient with this problem should have an opportunity for a trial of therapy. The patient and his relatives should give their informed consent, indicating that they realize that this is a new form of therapy for his condition, that there is no guarantee of a good result, and that there is some risk of serious complications and even death. But they should also be informed that they are confronted with a very serious and usually fatal disease often characterized by a gradual downhill course and eventual bedfastness. Thus, they may incur a greater risk by not undergoing the treatment. Improvement usually does not occur until four to five weeks after treatment is started. We advise a four-month course of therapy, since some patients take longer than others to show a good result. If improvement occurs, as is to be expected, the anticoagulant drug should be continued indefinitely, because experience has shown that when it is discontinued, about half of the patients will regress. Since it is not always possible to regain the improvement, a sad situation may result. If the anticoagulant has to be discontinued temporarily because of bleeding or a required surgical operation such as cataract or hernia, it can be restarted if deterioration again becomes evident.

Space limitation does not permit discussion of many other important factors in the senile dementias. These will be discussed fully in a forthcoming book on the legal as well as the medical aspects of mental competency (10).

REFERENCES