

THE INTENSIVE ELECTRIC SHOCK THERAPY OF CHRONIC DISTURBED PSYCHOTIC PATIENTS¹

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Intensive electric shock therapy, *i.e.*, therapy given daily or oftener, has become a validated procedure in the management of acute excitement states(1-3). This type of treatment has been advocated for curative purposes in both neurotic(4) and psychotic (5, 6) illnesses. It has also been used in the management of chronic psychotic patients (7, 8).

This report deals with the use of intensive electric shock therapy in the ward management of a group of chronic disturbed psychotic women patients over a 3-month period, from June 15 to September 15, 1949.

Our goals were not curative; they were limited to the level of improved ward behavior. We had in mind the management of chronic disturbed psychotic patients, free of restraint, seclusion, and sedation.

MATERIAL

Cottage E, Unit 5, of the Stockton State Hospital is the most disturbed of the chronic women's wards. Its average monthly census is 112 patients, with a rated capacity of 123. Approximately 14 patients are transferred to and received from other wards monthly. All types of chronic disturbed patients are handled on this ward, excluding tuberculous patients. The majority of the patients would fall under the heading of the functional psychoses; in addition there is a sprinkling of

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mental defectives, epileptics, old parenchymatous luetics, as well as postlobotomy patients. The average duration of hospitalization of those patients treated is 5.9 years. During the 3-month period covered by this report 123 patients were treated. The total number of shock treatments given was 2,655, or an average of 29 treatments daily. If Sundays on which no treatments were given are excluded, the daily average would be 34.

METHODS

Patients were selected for intensive maintenance electric shock treatment on the basis of their ward behavior. This meant, in general, disturbed aggressive behavior that required restraint, seclusion, and/or sedation, and prevented the patient from engaging in the normal ward routine, going to the dining and day rooms, yard, toilet, etc.

For our purposes we arbitrarily defined restraint as any mechanical restriction (leather wristlets, jacket, etc.) applied to a patient for over one hour. By seclusion we meant placing a patient in a single closed room during the day for over one hour.

Age and cardiovascular status were not considered contraindications to treatment. Routine pre- and postshock laboratory examinations were not performed. Patients treated ranged in age from 19 to 84.

We used an electric shock machine, model 160, manufactured by the Lektra Laboratories, Inc. All patients received a grand mal seizure.

A patient was started on this program with treatment once a day, and continued daily until she became manageable. Frequently 2 or more seizures were induced in one day if the patient was unduly disturbed. (On one occasion a severely disturbed epileptic received 6 induced grand mal seizures within one hour.)

As soon as the patient improved in her ward behavior, that is, when she was able to be out of restraint and/or seclusion and go

to the dining room, toilet, etc., treatment was discontinued. When she again became disturbed and unmanageable, treatment was resumed on a daily basis. Patients were therefore treated on what might be termed an extensive-intensive-maintenance basis, on a *pro re nata* schedule.

RESULTS

The results are shown in Tables 1 and 2. We have compared the amounts of restraint, seclusion, and sedation for the 3-month period prior to the intensive program with the amount used during the 3 months covered by this report. During the 13-week period immediately prior to the intensive program the average daily amount of restraint used was 35. For the 13-week period covered by this report the corresponding figure was 4. This represents roughly a 90% reduction in the use of restraint.

Similarly, prior to the program the average daily seclusion figure was 5. This dropped to 2 during the intensive schedule. Moreover, if the week during which a diarrhea epidemic occurred (September 7-13) is excluded (since all patients secluded then were isolated because of this illness), the corrected average daily seclusion becomes 1.4. This is roughly a 66% reduction in seclusion.

The reduction in sedation is also striking. Before the program the average daily doses of sedatives numbered 24. During the program it fell to 2.1, representing roughly a 90% reduction. Furthermore, there were 8 weeks out of 13 during which no sedation was used. (Routine sedation for epileptics is excluded.)

Complications as a result of shock treatment included two cases of unilateral hip (femoral neck) fracture.

SUBJECTIVE OBSERVATIONS

Patients varied a good deal in the amount and spacing of the treatment required. Some became manageable after 2 or 3 daily consecutive shocks. Others required a large number of daily treatments, for example, 20-40, before the desired results were obtained.

Originally we contemplated that we would be able to detect some pattern of periodicity to each patient's period of disturbance, so that a fixed schedule of prophylactic treat-

ment could be instituted. However, this did not occur, since patients varied greatly in the incidence of their disturbed episodes. We did not observe any regular pattern or periodicity in any of our patients' behavior. Hence treatment continued to be carried out as the patient's behavior demanded on a variable basis.

Within 2 weeks from the beginning of our intensive electric shock treatment the character of the ward changed radically from that of a chronic disturbed ward to that of a quiet chronic ward. Combative behavior of the patients diminished dramatically. Physical labor of the attendants was cut in half. For example, individual tray service for 40 to 50 patients per meal was abolished. Soiling and smearing were also markedly reduced. Patients in general became better "ward citizens," and in the words of one attendant "began to act like human beings." There was a general heightening of the morale of both attendants and patients.

DISCUSSION

Intensive electric shock therapy to produce an organic confusional state has been considered desirable in some quarters. We do not believe this always to be true. We found that many patients responded favorably in their ward behavior after 1, 2, or 3 daily consecutive treatments given at widely spaced intervals. In the case of some patients who received daily shock therapy for several weeks it was our impression that they did become confused, and that this could partially explain their improved behavior. We believe these observations indicate that confusional treatment *per se* is not the only means of improving psychotic patients undergoing electric shock treatment.

We have operated on the well-documented thesis that shock treatment of itself does not do permanent damage to the brain. At the time of writing, some of our patients have received over 100 treatments during this program. While there is on record (9) the case of a patient who received 248 electric shock treatments over a 1½-year period, we are not familiar with any reports of such a large number of treatments on an intensive level. Despite the uncertainties about the limits of intensive electric shock treatment as a main-

tenance procedure, we are continuing this program.

Some of our patients have improved re-

ment daily for many weeks bear to the lobotomized patient. This raises the question whether it is within the realm of possibility

TABLE 1

WEEKLY DATA SHOWING AMOUNTS OF RESTRAINT, SECLUSION, SEDATION, AND ELECTRIC SHOCK THERAPY PRIOR TO INTENSIVE PROGRAM *

Time	Restraint (No. times used)	Seclusion (No. times used)	Sedation †		Electric Shock Therapy	
			No. patients sedated	No. doses administered ‡	No. patients treated	No. treatments
March 15-21	254	40	93	117	47	47
March 22-28	269	42	84	120	37	37
March 29-April 4	268	41	100	139	42	42
April 5-11	270	44	108	147	47	47
April 12-18	280	49	96	124	47	47
April 19-25	276	47	91	108	39	39
April 26-May 2	265	32	91	118	35	35
May 3-9	270	43	138	185	41	41
May 10-16	271	26	149	191	31	31
May 17-23	261	26	158	193	35	35
May 24-30	240	24	160	187	40	40
May 31-June 6	154	17	137	171	36	36
June 7-14 §	132	22	198	235	44	44

* Treatments were given twice weekly. A total of 43 patients were treated in this group.

† Exclusive of routine sedation for epileptics.

‡ Includes all sedatives and narcotics.

§ Eight-day period.

TABLE 2

WEEKLY DATA SHOWING AMOUNTS OF RESTRAINT, SECLUSION, SEDATION, AND ELECTRIC SHOCK THERAPY DURING INTENSIVE PROGRAM

Time	Restraint (No. times used)	Seclusion (No. times used)	Sedation *		Electric Shock Therapy	
			No. patients sedated	No. doses administered †	No. patients treated	No. treatments
June 15-21	101	43	119	145	183	185
June 22-28	56	13	36	37	162	165
June 29-July 5	29	9	5	5	192	193
July 6-12	31	7	4	4	199	201
July 13-19	35	16	6	8	200	201
July 20-26	43	8	0	0	213	213
July 27-August 2	41	3	0	0	226	230
August 3-9	8	2	0	0	218	218
August 10-16	0	6	2	2	189	201
August 17-23	8	21	0	0	182	189
August 24-30	1	0	0	0	174	200
August 31-September 6	5	2	0	0	180	195
September 7-13 §	14	73 ¶	0	0	174	187
September 14-15 ‡ §	1	30 ¶	0	0	67	77

* Exclusive of routine sedation for epileptics.

† Includes all sedatives and narcotics.

‡ 2-day period.

§ On September 11 an epidemic of diarrhea with fever of unknown etiology occurred throughout the hospital.

¶ 7 of these patients were ill with diarrhea.

‖ All these patients were ill with diarrhea.

markably, considering the chronicity of their illness and the type of regressive behavior they displayed. We are impressed with the resemblance that some of our patients who receive large amounts of electric shock treat-

ment over a long period of time with a large number of treatments might obviate some of the failures of electric shock treatment in chronic psychotic patients.

SUMMARY AND CONCLUSIONS

1. Intensive electric shock treatment was tried on a large, chronic, disturbed psychotic women's ward over a 3-month period.

2. As a result restraint was reduced roughly 90%, seclusion roughly 66%, and sedation roughly 90%. Patients in general became better "ward citizens."

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