

Attitudes of Greek Nonpsychiatrist Physicians Toward Electroconvulsive Therapy

To the Editor:

Patient attitudes toward electroconvulsive therapy (ECT) have been studied frequently, as have attitudes of psychiatrists toward this treatment.^{1,2} Little research, however, has been conducted on the attitudes of nonpsychiatrist physicians toward ECT. This, we believe, is an important area because, in many countries, nonspecialists provide primary medical care for depression and, although they would not provide ECT themselves, they may influence treatment decisions indirectly, either by advice to the patients or by referral to the appropriate specialist. What little information is available shows that nonpsychiatrist physicians have more often negative attitudes toward in-patient psychiatric treatment in general, especially one involving drug treatment and ECT, and exaggerate possible harmful effects and lack of efficacy of these treatments.^{3,4} Correcting misconceptions about ECT in nonpsychiatrist physicians may be a useful step in improving the negative attitudes of the general public, which appear to remain alive not so much because of issues relating to efficacy or side effects, but primarily because of ignorance and prejudice.⁵

ECT in Greece is used infrequently, and there are large local variations in usage. There are no studies available yet, but from our knowledge, derived from information by colleagues working in different parts of the country, ECT is used mainly in the Athens area by the University neuropsychiatric institute and a handful of private psychiatric hospitals; only a few other psychiatric hospitals, mostly private, use it in the rest of the country. There is no general hospital psychiatric unit providing ECT in Greece. Therefore, nonpsychiatrist physicians are practically not exposed to this treatment in their everyday prac-

tice. This probably means that most of their knowledge and attitudes toward this treatment come either from their medical school training or from what they hear on the media and sporadic conversations with colleagues. As we were preparing a comprehensive questionnaire on psychiatric treatments to be sent to nonpsychiatrist physicians all over Greece, we decided to include 2 questions on ECT. We, therefore, mailed the questionnaire, consisting of 17 items on psychiatric treatments, to every fourth physician (excluding psychiatrists) on the mailing list of the Hellenic Medical Association, an association representative of all specialties in the medical profession within the frames of the whole of Greece. A total of 2400 physicians of various clinical specialties and varied clinical experience, including general practitioners and trainees, received the questionnaire along with a stamped, addressed envelope to facilitate reply. We would like to present the results pertaining to ECT to your readers. The 2 questions on ECT were as follows:

1. *Would you choose medication treatment over ECT for a particular psychiatric disorder even if ECT was known to be more effective for that disorder?*

The available selections for this question were YES, NO, and Do Not Know (DNK).

2. *Which of the following treatments would you consider most effective for the following disorders: a. schizophrenia, b. depression, c. anxiety disorder*

The available selections for the second question included: medication; psychotherapy; ECT; various combinations of these three treatments; and DNK.

A total of 1451 (64.5%) questionnaires were returned. The first question was answered by 1428 respondents. Results are shown in Table 1, broken down by broad specialty category (surgical, nonsurgical, and physicians who had not completed specialty training). Significant differences were found between YES and NO ($P < 0.001$) and between YES and DNK ($P < 0.001$), indicating that, in general, respondents would choose medication over ECT *even if they knew ECT was more effective*. Differences between specialty groups were also significant ($\chi^2 = 13.596$, $P < 0.01$). Differences between the "not completed specialty training" and the other categories for the NO answer, indicated that physicians who had not completed specialty training would choose ECT over medication, more so than physicians with specific specialty training. Percentages, however, were low for all groups.

The second question was answered by 1412 respondents for schizophrenia, 1413 for depression, and 1416 for anxiety disorders. Combined results are presented as a survey in Table 2. Clearly ECT was considered effective for depression only by a small percentage of respondents, fewer than the respondents who considered it effective for schizophrenia.

From the answers received several things became apparent. First, Greek physicians, in general, would prefer to prescribe psychotropic medication for a psychiatric disorder, even if they knew ECT was more effective for that disorder, indicating a possible negative bias toward ECT, or at least a feeling of awkwardness toward the selection of this treatment. This, of course, is understandable to a

TABLE 1. Question 1: Would You Prefer Medication Treatment to ECT for A Particular Psychiatric Disorder Even If ECT Was More Effective for That Disorder? – Answer By Specialty Category

	YES	NO	DNK	Totals
Nonsurgical	369 (52.71)	136 (19.43)	195 (27.86)	700
Surgical	179 (53.59)	66 (19.76)	89 (26.65)	334
NCS training	188 (47.84)	112 (28.50)	94 (23.66)	394
Totals	736	314	377	1428

Row percentage in parentheses.

NCS training indicates "not completed specialty training" and includes general practitioners and trainees.

TABLE 2. Question 2: Which of the Following Treatments Would You Consider Most Effective for the Following Disorders: A). Schizophrenia, B). Depression, C). Anxiety Disorder? Please Select Treatment (Rx) Options and Combinations

Rx	Schizophrenia		Depression		Anxiety Disorder	
Medication (M)	630	44.5%	510	36.1%	246	17.4%
Psychotherapy (P)	63	4.45%	254	18.0%	819	57.8%
ECT	135	9.5%	84	5.9%	1	0.1%
Combinations	282	19.8%	379	26.8%	271	19.1%
DNK	303	21.3%	185	13.2%	79	5.6%
Totals	1413	100%	1412	100%	1416	100%

DNK indicates do not know.

certain extent. Having more experience with psychiatric drugs and probably none with ECT, physicians would prefer the known treatment, even having no prejudice against ECT.

Surgical and nonsurgical specialties were not different in this preference. Surprisingly, it was physicians who had not completed specialty training (that is general practitioners and trainees) who would choose ECT over medication. Because these physicians tend to be younger, we believe that this may reflect the changing attitudes toward evidence-based medicine we have witnessed in newer generations of physicians, as well as their exposure to better instruction regarding ECT. Better education does seem to play a role in changing attitudes toward ECT.⁶ It also may suggest that specialized physicians may be set in their ways and their choices and may be more conservative in supporting treatments they may be less familiar with.

The survey on the treatment method to be chosen for specific psychiatric illnesses (schizophrenia, depression, anxiety disorder) shows that ECT would be chosen by few physicians for depression, even less than those who would choose this treatment of schizophrenia. We believe that this reflects that physicians tend to think of ECT as a treatment for severe refractory psychiatric illness, as a last resort treatment so to speak, with no specific indications. The more severe the illness, the more physicians (although not many) would think of suggesting ECT. This, again, is understandable to a certain extent, and reflects the overall attitudes of many psychiatrists as well toward ECT, but we expected that more physicians would consider it a specific treatment for depression.

Obviously the number of questions is too small to properly investigate attitudes, and the way the questions were phrased forces a comparison of ECT to other psychiatric treatments, mainly medication, with which nonpsychiatrist physicians are more familiar. However, this set of data comes from a larger questionnaire looking into attitudes about psychiatric treatments and we were concerned that any attempt to increase the length of the questionnaire would seriously compromise the number of respondents. This has been our experience with other similar surveys. We kept statistical analyses at a minimum. In lack of more specific questions to investigate details behind the choices and prescribing practices of the Greek physicians, a more exhaustive analysis would add little to our findings. We believe, however, that the importance of this survey lies first in showing, for the first time, attitudes of Greek physicians toward ECT, and second, that it shows that Greek physicians are still, in general, reserved toward ECT. This indicates that more educational efforts are necessary in Greece if this treatment is to be redeemed and used appropriately.

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Length of the ECT Course in Bipolar and Unipolar Depression

There has long been interest in whether unipolar (UP) and bipolar (BP) patients differ in likelihood or speed of responding to electroconvulsive therapy (ECT). Until recently, the handful of studies that have addressed this issue conducted retrospective analyses of case series. Abrams and Taylor,¹ Avery and Winokur,² and Black et al³ found that ECT had equivalent efficacy in BP and UP depressed patients. In contrast, Homan⁴ reported that UP patients were more likely to show marked improvement than BP depressed patients. The issue of speed of response received less attention. Among patients characterized as having depressive psychoses, Perris and d'Elia⁵ found that BP patients had a faster response than UP patients, requiring fewer treatments.

Recently, we⁶ compared the clinical outcomes of UP and BP depressed patients who had participated in 3 prospective, randomized, double-masked trials conducted at the New York State Psychiatric Institute and Columbia University.^{7–9} There was no difference in rates of response or remission, but BP patients received fewer treatments. This shorter treatment course was attributable to faster onset of clinical improvement in the BP group, was manifested in the total sample as well as in the sample restricted to ECT responders, and was independent of treatment conditions, such as electrode placement and stimulus dosage, and the clinical

features that distinguished the UP and BP groups. On average BP patients received 1.5 fewer treatments than UP patients.

The patients in the Daly et al⁶ report had participated in protocols involving extensive medication washout, close clinical observation throughout the ECT course, and other procedures specific to highly controlled efficacy studies. In contrast, we recently completed a prospective, observational study of clinical and cognitive outcomes in consecutive patients referred for ECT at 7 hospitals in the New York City metropolitan area.¹⁰ The availability of this sample allowed us to determine whether the findings that BP and UP patients had equivalent efficacy but that BP patients required fewer treatments generalized to the routine use of ECT in community settings.

Sample characteristics and clinical assessment and treatment procedures in the Prudic et al¹⁰ study have been described. Of the intent-to-treat sample of 347 patients, 14 patients met the DSM-IV for schizoaffective disorder and were excluded from further analysis. The remaining sample of 333 patients comprised 279 UP and 54 BP participants.

Response was defined as a reduction of at least 50% in scores at postECT relative to preECT on the Hamilton Rating Scale for Depression (HRSD). Two remission criteria were used with a postECT HRSD score of 10 or less the criterion for remission¹⁰ and a postECT score of 7 or less criterion for remission₇. χ^2 analyses indicated that the UP and BP groups did not differ in response rate (UP: 64.2% vs. BP: 68.5%, $P = 0.54$), remission₁₀ rate (UP: 46.2% vs. BP: 55.6%, $P = 0.21$), or remission₇ rate (UP: 31.5% vs. BP: 29.6%, $P = 0.78$). The absence of a difference in response or remission rates was maintained when these outcomes were submitted to log-linear analyses, with UP versus BP diagnosis as a between-subject factor and controlling for psychotic versus nonpsychotic depression, age, gender, preECT HRSD score, episode duration, medication resistance status, ECT electrical waveform (pulse vs. sine), ECT electrode placement (unilateral vs. bilateral), and ECT electrical dosage (percent of maximum device output).

The UP and BP subgroups differed in the number of treatments administered

(UP: 7.3 ± 3.0 [mean \pm SD] vs. BP: 5.8 ± 2.4 ; $t(331) = 3.4$, $P = 0.0006$). An analysis of covariance on the number of treatments administered with the same independent variables as in the log-linear analyses yielded effects for UP versus BP diagnosis ($P = 0.0006$), episode duration ($P = 0.002$), medication resistance ($P < 0.05$), electrical waveform ($P = 0.0005$) and electrode placement ($P = 0.04$). Patients with UP disorder, longer episode duration, and medication resistance and those treated with brief pulse stimulation and the bilateral electrode placement received a greater number of treatments.

To establish that this difference between UP and BP patients reflected a difference in speed of response, the sample was restricted to the 216 patients (179 UP and 37 BP) who were classified as postECT responders. Among responders, BP patients received fewer treatments than UP patients (UP: 7.2 ± 2.5 vs. BP: 6.2 ± 2.3 , $t(214) = 2.2$, $P = 0.03$). When the ANCOVA model was applied to the responder sample, the difference between UP and BP patients in number of treatments remained significant ($P = 0.01$).

The number of ECT treatments was categorized into groupings of 5 or

fewer, 6 or 7 treatments, 8 or 9 treatments, and 10 or more treatments. As seen in Figure 1, BP patients were over-represented in the subgroup that received 5 or fewer treatments and were under-represented in the subgroup that received 10 or more treatments ($\chi^2[3] = 10.3$, $P = 0.02$). Thus, BP patients were especially likely to have the shortest courses, whereas UP patients were especially likely to have the longest courses.

With one exception,⁴ several studies found that UP and BP depressed patients do not differ in the efficacy of ECT.^{1-3,5,6} This negative finding was supported in these analyses of the largest, prospective sample to be studied to date and the only sample treated in diverse community settings. In contrast, this study and the two prior studies^{5,6} that tested for differences in length of ECT course each found that BP patients received fewer treatments. The fact that this effect is maintained when restricting the sample to responders implies that speed of clinical improvement is generally faster in BP than UP patients.

The difference in average length of the ECT course between BP and UP patients is of clinical consequence, averaging 1.5 treatments in both the

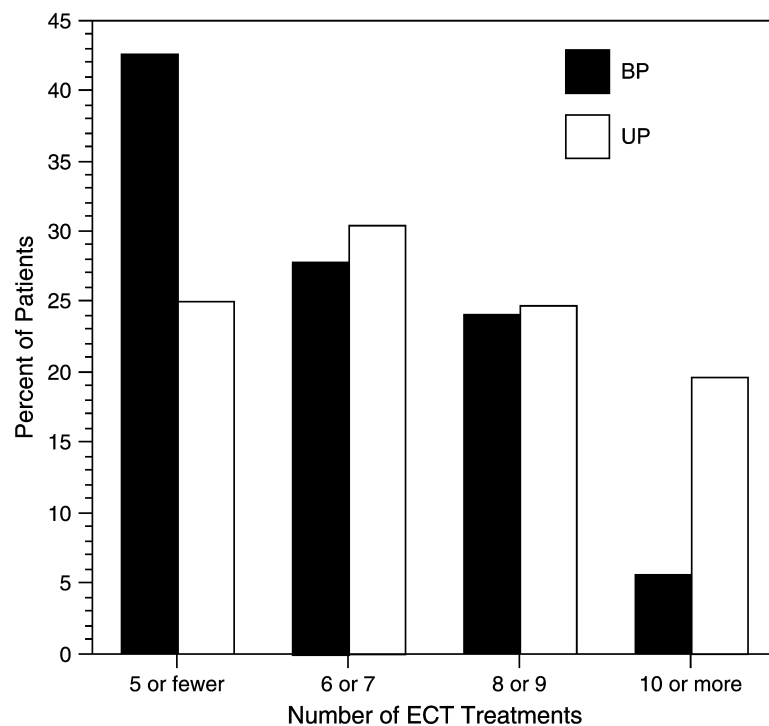


FIGURE 1. Percentage of UP ($n = 279$) and BP ($n = 54$) patients who received 5 or fewer, 6 or 7, 8 or 9, or 10 or more treatments.

Daly et al⁶ and this study. To our knowledge, this is the only replicated instance in ECT where a patient characteristic is predictive of speed but not likelihood of response. It has been shown that electrical dosage has little impact on rates of response to bilateral ECT (in contrast to unilateral ECT), but that higher electrical dosage relative to seizure threshold results in more rapid clinical improvement regardless of electrode placement. Were seizure threshold lower in BP than UP patients, the common use of fixed dosing in this community sample could have resulted in this specification by inadvertently dosing BP patients to a greater extent above their seizure thresholds. However, explicit comparisons of BP and UP patients in seizure threshold have not detected differences.¹¹ Further, in the samples examined by Daly et al⁶ dosage was carefully adjusted to the seizure threshold of each patient. Rather, it appears that independent of treatment technique, BP patients tend to have a more brisk response to ECT than UP patients and this likely reflects a quantitative difference in the neurobiological effects of the seizure induction in the these diagnostic subtypes.

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Incident Mania During Therapy With Vagus Nerve Stimulation

To the Editor:

Vagus Nerve Stimulation (VNS) refers to therapeutic stimulation of the left vagus nerve with electrical currents. First studies in treatment resistant depressive patients reported positive, although preliminary, results and only few side effects.¹ We present a case of a patient with a history of treatment refractory unipolar recurrent major depression, who developed her first manic episode after six months of VNS treatment.

Ms. R., aged 59 years, with a DSM-IV diagnosis of unipolar major depression had no ascertainable history of bipolar disorder. During the 26 years of illness she was hospitalized five times and had been treated with maprotiline, citalopram, fluvoxamine, venlafaxine, reboxetine, clonidine and escitalopram at standard doses and various forms of psychotherapy with insufficient response. Lithium augmentation was stopped because of unbearable side effects. A VNS-system was implanted. After two weeks stimulation was started and adjusted to a comfortable level (1.5mA/20Hz/30s ON/5min OFF). After three months the HAMD-21 rating decreased by 70% and remained below a score of 13 during two months. Thereafter her condition wors-

ened slightly (HAMD = 18). After six months of VNS treatment the patient had to be admitted to a psychiatric hospital because of an episode of acute mania: She had irritable mood, acted in an impulsive manner, reported significantly less need for sleep, was very talkative, had reduced concentration abilities and her goal directed activities were increased. Drug therapy was changed from clonidine (40 mg/d) and escitalopram (10 mg/d) to olanzapine (up to 30 mg/d) and valproate (up to 1500 mg/d). The device remained turned on, without any changes of the parameter settings. The patient was discharged after five weeks without symptoms of mania. Her condition could be stabilized under a medication of olanzapine (5 mg/d), escitalopram (20 mg/d) with unchanged valproate and VNS stimulation dose.

In previously reported cases of potentially VNS-induced hypomania, the stimulation had been reduced and medication changed^{2,3} but it remains unclear, whether the changes of the VNS-parameters were necessary to treat hypomania. Unclear remains also whether the episode of incident mania in this case was due to VNS therapy. Incident mania might be a rare but clinically significant side effect of chronic VNS stimulation. Further investigations are needed.

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Why Some Psychiatrists May Be Unwilling To Receive Electroconvulsive Therapy

To the Editor:

Gazdag et al¹ observed that 57 (88%) of 65 Hungarian psychiatrists referred patients for ECT, and that as many as 27% of these 57 psychiatrists would not consider ECT for themselves even if psychotically depressed. In an Indian study,² we found that 31 (17%) of 180 psychiatrists who advised ECT for patients were themselves unwilling for ECT even if indicated. As reviewed by Gazdag et al,¹ these percentages range from 8% to 16% in other parts of the world.

Gazdag et al¹ suggested several explanations for the dissonance between advice provided to patients and the choice for oneself: psychiatrists who refuse ECT may be reluctant to undress before colleagues or to receive a treatment that may result in incontinence; they may be dissatisfied with the standards of ECT practice at their center; they may be so unwilling to consider illness in themselves that they also reject ideas for the treatment thereof.

There are 2 far more likely explanations for the dissonance. The first is that one's sense of identity is strongly tied to one's autobiographical memories; therefore, the risk of losing precious memories could weigh heavily against the option of accepting ECT. Psychia-

trists are more aware of these cognitive risks than are members of the general public and are also more aware of the occasional patient who experiences extensive memory loss.³ Psychiatrists may therefore be more likely to view the adverse effect with exaggerated anxiety. Psychiatrists also may be unwilling to risk nonautobiographical memories; for example, in our Indian study,² one psychiatrist wrote (in the space provided for comments) that he was employed in an academic institution, that his integrity as a teacher and as a researcher depended on his extensive recall of literature, that he was afraid of the effect that ECT may have on his academic memories, and that he, therefore, was unwilling to ever receive ECT even though he prescribed ECT for patients. In this context, Lisanby et al⁴ found that in both the short and intermediate term, impersonal memories were more vulnerable to ECT than personal memories, and memories that were emotionally less salient were more easily lost than those that were emotionally more salient. Regrettably, there are no empirical data on the extent to which professional memories are affected by ECT.

The second explanation is that a psychiatrist who is well and who refuses to consider ECT for a hypothetical illness is different in an important way from a patient who is ill and who consents for ECT; the difference is the absence versus the presence of illness. It is conceivable that a psychiatrist who is severely depressed, who has failed medication trials, and who has seen how patients improve with ECT will be

willing and even eager to receive a treatment that is associated with high response and remission rates within 2–4 weeks of the initiation of treatment⁵; alternately, the knowledge that unilateral ECT is relatively memory-sparing would also be reassuring.⁶ Regrettably, although anecdotal reports have been published,^{7,8} there are no empirical data on the willingness of physicians or neuroscientists to receive ECT when actually depressed.

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