Research Paper: ORIGINAL ARTICLE

A RETROSPECTIVE STUDY OF THE CLINICAL OUTCOME OF BIPOLAR DISODERS IN A MENTAL HEALTH FACILITY IN NORTH-EASTERN NIGERIA

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Abstract

Background: The efficacy and cost effectiveness of mood stabilizers in bipolar affective disorders have been established. Addition of mood stabilizers to a treatment regimen increases cost 8 folds. However, in Africa how affordable an intervention is makes all the difference, as initiation of treatment and compliance depends on it. The prescription of mood stabilizers in our environment is complicated by economic considerations. Local evidence is required to justify the enormous increase which follows the addition of mood stabilizers to treatment regimen in one of the most impoverished regions of Africa.

Aims: To describe the patterns of treatment of bipolar illness in north-eastern Nigeria and to determine if there is any relation between use of mood stabilizers and a positive treatment/ prophylaxis outcome.

Method: A 2 year case controlled retrospective study (2004-2006) of all bipolar disorder cases was conducted and comparison between patients treated with mood stabilizers plus antipsychotics and those on antipsychotics only was made. A total 225 of all diagnosed cases of bipolar affective disorder that met the inclusion criteria were included in the study.

Results: The average age of presentation of our patients is 19.5 years, with an equal male to female ratio. Majority (70%, n= 157) were diagnosed as bipolar affective disorder current episode manic. Most of the patients (79%, n=166) were treated with typical antipsychotics only, while only (20%, n=45) had a combination of mood stabilizers and antipsychotic, less than 1%, (n=4) received atypical. The differences between the compared groups in terms of core symptoms relief and clinician's impression were statistically significant (χ^2=21.5, 2df, p< 0.005; χ^2=9.8, 2df, p< 0.005). While 43% of patients on mood stabilizers experienced no relapses in 2 years, all the patients on typical antipsychotic alone had at least one relapse.

Conclusions: Bipolar patients do well clinically when placed on mood stabilizers, yet only a minority who are able to afford benefit from its inclusion into their treatment regimen, resulting in a generally poor outcome, increasing burden on family members, as well as stigmatization by the wider community. Clinicians practicing in underdeveloped countries should feel confident in prescribing mood stabilizers and governments should subsidize the cost of mental health care.

Keywords: Bipolar, Mood stabilizer, Treatment , Outcome, Sub-Saharan Africa

Introduction

Bipolar affective disorders have a natural history of recurrence after complete remission of symptoms.[1] Hence, in formulating an effective treatment approach; attention is paid not only in targeting active symptoms but, also relapse prevention. Until relatively recently, the standard treatment of bipolar illnesses have been the use of antipsychotic medications plus anti depressants when necessary. Concern among clinicians about the unsatisfactory outcome of this method, at least in the area of relapse prevention, has led to the introduction of a new category of drugs, the mood stabilizers.

Over the years since being introduced evidence has accumulated on their effectiveness and long term efficiency.[2, 3, 4, 5]. Clinicians in the developed world consider as routine the prescription of these methods of

intervention. However, in a study of pattern of bipolar illness in the pre and post mood stabilizer era a significant rise in the number of hospital admissions per 1 million populations was observed.[6] There were also an increased number of bipolar patients per million in acute as well non-acute care services in the post mood stabilizer period than the period prior to the introduction of mood stabilizers.[6] Some uncertainty has been raised about mood stabilizers by some authors.[7]

In Africa how affordable an intervention is makes all the difference, as on it depends not only compliance but, even the initiation of treatment. The addition of mood stabilizers in the treatment of bipolar disorders increases the cost of care by about 8 fold which may affect the health seeking behaviour of many of our patients, majority of whom live on less than a dollar per day.[8] Add this to the duration of treatment needed for the disorder clearly sustainability of compliance becomes a really difficult issue. With these facts always looming behind the mind of a clinician the prescription of mood stabilizers is not so straight forward in our environment, a quick cost-benefit analysis almost always goes into the exercise of mood stabilizer prescriptions. Local evidence, aside from contributing to the global evidence, concerning the outcome of the treatment modalities utilized for our patient population, may also facilitate the decision making process in the management of these disorders.

Aim and Objectives

The aim of the study is to assess the clinical outcome of the treatment of bipolar disorders by;

1. Descriptions of patterns of treatments of bipolar disorders
2. Establishing a possible association between mood stabilizer use and treatment outcome
3. Establishing a possible association between mood stabilizer use and prophylaxis outcome.

Materials and Methods

The study was conducted in the Federal Neuro-psychiatric hospital, Maiduguri which is a mental health facility that provides mental health services to about 20 million Nigerians in the north-Eastern region and some communities from the neighboring republics of Chad, Cameroon and Niger.

The study design is a controlled retrospective study of patients on mood stabilizers and those not on mood stabilizers. Included in the study are all diagnosed cases of bipolar affective disorders or single episode of mania from 2004-2006, who have been on medications up to at least 6 weeks while cases with co-morbidity were excluded.

Materials

1. Proforma was designed to extract data from the clinical notes
2. Clinical global impression scale (CGI) were used to assess core symptom relief

Procedure

Access to the clinical notes of the patients was made after obtaining ethical clearance from the hospital ethical committee. Only patients with diagnosis of bipolar disorders were included, co-morbid cases and those with inadequate information were excluded. Diagnosis of bipolar disorder was based on the clinician's impression. Core symptoms were defined clinically based on the ICD-10 criteria within the last 6 months.

Results

Socio-demographic Characteristics of Patients

A total 225 of all diagnosed cases of bipolar affective disorder that met the inclusion criteria were included in the study. The average age of presentation of our patients is 19.5 years, with an equal male to female ratio. There was a high level of unemployment (60%, n=133) and illiteracy (64.4%, n=144). Majority (70%, n= 158) were diagnosed as bipolar affective disorder current episode manic, 24% (n=54) had mania, 5.3% (n= 12) Bipolar affective disorder current episode depressive and 0.4% (n=1) mixed states.

In table 1 the pattern of prescription of the patients reveals majority 78.7% (n=166) had typical antipsychotic medications alone for the management of their condition, while 19.4% (n=41) and only 1.9% (n=4) had atypical antipsychotic.

Of the 95 bipolar affective disorder patients who were treated with typical antipsychotic agents alone, only 19 had marked improvement of core symptoms 6 weeks into the treatment, most of the patients on this regimen (n= 44) had only a mild relief of core symptoms.

Table 1: *Patterns of Drug Prescription for bipolar affective disorders*

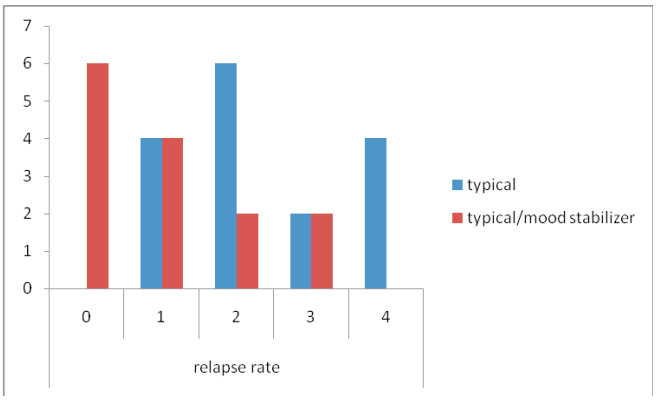
Treatment Regimen	Frequency (n)	Percent (%)
Typical antipsychotics only	166	78.7
Typical antipsychotics/mood stabilizer	41	19.4
Atypical antipsychotics only	4	1.9
Total	**211**	**100**

Table 2: *Comparism of modality of treatment and clinical outcome of patients treated for bipolar affective disorder*

	Core Symptom relief			
	Mild	Moderate	Marked	Total
Treatment Regimen				
Typical antipsychotics only	44	32	19	95
Typical antipsychotics & mood Stabs.	5	8	21	34
Atypical antipsychotics only	-	3	1	4
Total	**49**	**43**	**41**	**133**

(χ^2=21.5, 2df, p< 0.005).

Figure 1: *relapse rate for bipolar patients*



However, 21 out of 34 on a combination of mood stabilizers and the typical antipsychotic had marked improvement. This difference is statistically significant (χ^2=21.5, 2df, p< 0.005). Table 2.

Relapse Rate

While 43% of patients on mood stabilizers experienced no relapses in 2 years, all the patients on typical antipsychotic alone had at least 1 relapse. There were also differences of 0% Vs 29% respectively, between patients on mood stabilizer-typical combination and typical antipsychotic alone in experiencing up to 4 relapses over the same 2 year period (Figure 1).

Compliance to medication

The compliance to medications of the patients is different for the various medications on which they appear to be placed. The compliance of patients seen over this two year period is generally poor 69% (n= 201) were non-compliant, but even here; some difference between the two groups is discernable. While 28% (n=45) of patients not on mood stabilizers were compliant on medications six months after the commencement of treatment, 43% (n=17) of those on mood stabilizers were compliant over the same period. Table 3.

Disscussions

Economic consideration in therapy

Majority of the patients were placed on the typical antipsychotic medications alone few on mood stabilizers. And even within the mood stabilizers the least expensive, constituted by far the most widely prescribed. It seems economic considerations played important role in the choice of therapeutic options available, when one considers the fact that, the important correlates of socio-economic status of individuals are literacy and employment status, which determines income. The high level of illiteracy and unemployment among our patients is a pointer to a low social status.

Table 3: *Treatment modality and compliance to medication*

	Treatment modality		
	Typical antipsychotics only	typical antipsychotics /mood stabilizer	Total
Compliance in 6 months			
Good (no default)	45(28%)	17(43%)	62
Bad (>1default)	116(72%)	23(57%)	139
Total	161	40	201

Compliance to medications

Bipolar affective disorders are re-occurring illnesses, poor compliance to medications tend to compound this within our patient population who are mostly illiterate and unemployed. Relapse rate being relatively low in those on mood stabilizers ensures longer period of insightfulness that enhances compliance to medications.

These factors may be acting in concert such that, improved compliance may explain the reason for low relapse rate and the high relapse rate may be due to the associated poor compliance among the patients on typical antipsychotic medications.

Cost effectiveness of mood stabilizers

Mood stabilizer use compared to non use is related to improved clinical outcome in terms of relief of core symptoms, compliance to medications and relapse rate. These are clinical parameters that limit hospital admissions and huge cost associated with it. Although the unit cost per drug for patients on mood stabilizers is high compared to those on typical antipsychotic alone the cost effectiveness in the long run seem better for those on mood stabilizers.

Conclusions

1. Mood stabilizers are effective in improving clinical outcome of bipolar disorders among our patient population
2. The clinical outcome observed with the use mood stabilizers may be related to the higher rate of compliance associated with the use of these category of medication
3. The low frequency of prescription of mood stabilizers may be related to the relatively higher cost.

Limitations

The study limitations include inadequate information due to poor documentation, loss or poor storage.

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