

Taylor & Francis
Taylor & Francis Group

Psychiatry and Clinical Psychopharmacology

ISSN: 2475-0573 (Print) 2475-0581 (Online) Journal homepage: https://www.tandfonline.com/loi/tbcp21

Aripiprazole as a treatment option for delusional parasitosis: case series of 8 patients

Meltem Çınar, Pelin Kutlutürk, İrem Ekmekçi Ertek & Behçet Coşar

To cite this article: Meltem Çınar, Pelin Kutlutürk, İrem Ekmekçi Ertek & Behçet Coşar (2019) Aripiprazole as a treatment option for delusional parasitosis: case series of 8 patients, Psychiatry and Clinical Psychopharmacology, 29:4, 794-797, DOI: 10.1080/24750573.2019.1653134

To link to this article: https://doi.org/10.1080/24750573.2019.1653134

© 2019 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 31 Aug 2019.

Submit your article to this journal

Article views: 917

View related articles

View Crossmark data

Citing articles: 1 View citing articles

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=tbcp21

PSYCHIATRY AND CLINICAL PSYCHOPHARMACOLOGY
2019, VOL. 29, NO. 4, 794–797
https://doi.org/10.1080/24750573.2019.1653134

Taylor & Francis
Taylor & Francis Group

CASE REPORT

OPEN ACCESS Check for updates

Aripiprazole as a treatment option for delusional parasitosis: case series of 8 patients

Meltem Çınar, Pelin Kutlutürk, İrem Ekmekçi Ertek and Behçet Coşar

Department of Psychiatry, Faculty of Medicine, Gazi University, Ankara, Turkey

ABSTRACT

OBJECTIVE: Delusional parasitosis (DP), also known as Ekbom's Syndrome, is a rare, generally monosymptomatic disorder that characterizes with the fixed belief of being infected by parasites without any evidence of medical or microbiological proof. These patients are examined in dermatology and infection clinics with symptoms and signs of pruritus, skin and subcutaneous scars secondary to itching. Primary DP is diagnosed when no etiological factor is detected while secondary DP arises from underlying physical or mental disorder. Formerly, pimozide was the commonly preferred choice of treatment with cases of DP. However, there is growing evidence that second-generation antipsychotics and antidepressants can be used in the treatment of DP. In this study, the usage of aripiprazole in the treatment of DP cases is presented.

METHODS: 8 patients with the diagnosis of primary DP were evaluated in terms of demographic data, clinical variables and responses to treatment. A psychiatric diagnosis was made based on a clinical interview performed using Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) SCID-I. The patients were followed for six months. Three patients were female, five patients were male. The average age of the patients was 57.5. Four patients had essential hypertension as comorbidity. The duration of the symptoms ranged from 6 to 48 months with an average of 24.75 months. All of our 8 cases were consulted by the dermatology department. The patients were performed Hamilton Depression Scale (HDS) and Mini-Mental Status Examination (MMSE). Eight patients were treated with aripiprazole 10 or 15 mg/day, and no dose alteration was made.

RESULTS: From the patients who were treated with aripiprazole, seven (87.5%) patients had complete remission after three months, eight (100%) patients achieved complete remission after six months.

DISCUSSION: The earliest drug choice for patients with DP was pimozide, but because of the extrapyramidal side effects and cardiac side effects like QTc prolongation, second-generation antipsychotics are being investigated for treatment. Various researches are available related to the usage of second-generation antipsychotics like risperidone, olanzapine, paliperidone, ziprasidone, quetiapine, and aripiprazole in the cases with DP. This study shows that aripiprazole can be a successful treatment choice for DP, but further studies are needed for this topic.

ARTICLE HISTORY
Received 12 June 2019
Accepted 31 July 2019

KEYWORDS
Delusional parasitosis; Ekbom's Syndrome; delusional infestation; aripiprazole; atypical antipsychotics; psychodermatology

Introduction

Delusional parasitosis, also known as Ekbom"s syndrome, is a rare monosymptomatic delusional disorder in which patients have the false unchangeable belief that they are infested by small living pathogens, although there is no medical evidence [1]. These patients are examined in dermatology and infection clinics with symptoms and signs of pruritus, excoriations, contact dermatitis [2].

Primary delusional parasitosis, which has no underlying cause or illness, meets the criteria of "delusional disorder, somatic type" [3]. The DSM-5 outlines five criteria for the diagnosis of primary delusional infestation. First, the patient has presented with the delusion for longer than one month as noted by her continued admissions for the same chief complaint over the past few years. Second, s/he has never been diagnosed with schizophrenia. Third, as demonstrated in her physical exam findings, her functioning is not markedly impaired, nor would her behaviour be considered bizarre or odd. Fourth, the disturbance is not attributable to substance use or other comorbid conditions which is supported by the negative toxicology screen. The fifth and final criteria for primary delusional infestation states that if manic or major depressive episodes have occurred, they have been brief in relation to the delusions [3].

On the other hand, secondary delusional parasitosis (DP) may occur due to substance abuse, dopaminergic medications, antibiotics, and some physical or mental

CONTACT Meltem Çınar mcinar012@gmail.com Department of Psychiatry, Faculty of Medicine, Gazi University, Emniyet Mahallesi, Mevlana Bulvarı, No:29, 06560, Yenimahalle/ANKARA, Ankara, Turkey

© 2019 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

illness [4]. For psychiatric illness, secondary DP is mostly associated with schizophrenia, followed by bipolar disorders and major depression [3,4]. Female predominance can be observed in most case series; according to one meta-analysis, male to female ratio is 1 / 2.364. The mean age of the onset is described as between 55 and 65 years [5]. The gender ratio is nearly balanced under the 50 years, but after 50 years, female predominance is observed [4].

Antipsychotics, such as risperidone, olanzapine, amisulpride, haloperidol, paliperidone, ziprasidone, quetiapine, aripiprazole can be used in the treatment of DP [1,6]. In another study conducted in our clinic, olanzapine and risperidone were successfully used in patients with DP [7]. Also, in two cases, paliperidone was used and remission of the symptoms was observed [8]. In history, pimozide was widely used as a treatment choice, but it is no longer recommended because of drug safety issues [6,9].

There are some researches about DP in the literature but further information and researches are needed. In this study, we followed eight patients with the diagnosis of primary delusional parasitosis, treated by aripiprazole. We present our cases' demographic and clinical characteristics and the results of the treatments.

Methods

Subjects

Our eight patients are recruited from our consultation-liaison psychiatry clinic. They all referred by the dermatology department since 2014.

Procedure

8 patients with the diagnosis of primary DP were evaluated in terms of demographic data, clinical variables and responses to treatment. The psychiatric diagnosis was made based on a clinical interview performed using SCID-I. The patients were performed Hamilton Depression Scale (HDS) and Mini-Mental Status Examination (MMSE). In order to rule out other medical causes, we performed tests including full blood count, liver, kidney function tests, thyroid function tests, glucose, syphilis serology, iron folate, and vitamin B12 levels and cranial magnetic resonance imaging. Other medical causes were excluded and delusional parasitosis diagnosis was sealed. The treatment of the patients started by the consultant psychiatrist. Eight patients were treated with aripiprazole 10 or 15 mg/day, and no dose alteration was made. The patients were followed for six months. After the initiation of the treatment, patients were examined again using SCID-I at the third and sixth months.

Statistical analysis

Sociodemographic and clinical characteristics of the patients were documented quantitatively. Data were analyzed with the SPSS 22.0 programme.

Results

All of our eight cases were consulted by the dermatology department. Demographic data and clinical features of the cases are presented in Tables 1 and 2.

All of the patients had been diagnosed with primary delusional parasitosis. The duration of the symptoms ranged from 6 to 48 months with an average of 24.75 ± 14.49 months. Although these patients may be accompanied by fear of transmission to others, this was not seen in our cases. Cortical atrophy can also be seen in these patients, but no cortical atrophy had detected on any patient''s magnetic resonance imaging. All patient''s mini-mental status examination scores were above 27.

All of the patients were treated with aripiprazole. Five (62.5%) patients were given 10 mg aripiprazole, three (37.5%) patients were given 15 mg aripiprazole. No adverse reactions related to antipsychotic drugs were observed. The average initiation dose of aripiprazole was 11.87 ± 2.58 mg/day. The average doses on the 6th month were the same as the initiation doses because no dose alteration was done. The dosage of aripiprazole of those patients who completely remitted at the end of the 3rd month was 12.14 ± 2.67 mg/day. In the 3rd month after the initiation of the treatment, seven (87.5%) patients showed complete remission, in

Table 1. Demographic and clinical characteristics of cases with delusional parasitosis.

Case	Age	Gender	Marital Status	Education	Comorbid illness	Diagnosis	Duration of symptoms (months)	Cortical atrophy on MRI	Clinic	Fear of contaminating others
1	67	M	Single	Primary school	HT	Delusional disorder	36	–	Dermatology	–
2	69	M	Married	Primary school	–	Delusional disorder	24	–	Dermatology	–
3	72	M	Married	Primary school	HT	Delusional disorder	36	–	Dermatology	–
4	60	F	Divorced	Primary school	–	Delusional disorder	12	–	Dermatology	–
5	65	F	Divorced	Primary school	–	Delusional disorder	24	–	Dermatology	–
6	67	F	Divorced	University	HT	Delusional disorder	6	–	Dermatology	–
7	59	M	Married	University	–	Delusional disorder	12	–	Dermatology	–
8	70	M	Married	Primary school	HT	Delusional disorder	48	–	Dermatology	–

MRI: Magnetic Resonance Imaging.
HT: Hypertension.

Table 2. Hamilton Depression Scale (HDS) and Mini Mental Status Examination (MMSE) results and treatment-outcome in cases with delusional parasitosis.

Case	HDS	MMSE	Initial treatment	Outcome on 3rd month	Treatment between 3rd and 6th months	Outcome on 6th month
1	10	29	Aripiprazole 10 mg	Complete remission	Aripiprazole 10 mg	Complete remission
2	8	30	Aripiprazole 15 mg	Complete remission	Aripiprazole 15 mg	Complete remission
3	11	27	Aripiprazole 15 mg	Complete remission	Aripiprazole 15 mg	Complete remission
4	8	30	Aripiprazole 10 mg	Complete remission	Aripiprazole 10 mg	Complete remission
5	10	30	Aripiprazole 10 mg	Complete remission	Aripiprazole 10 mg	Complete remission
6	8	30	Aripiprazole 10 mg	Complete remission	Aripiprazole 10 mg	Complete remission
7	12	30	Aripiprazole 15 mg	Complete remission	Aripiprazole 15 mg	Complete remission
8	12	27	Aripiprazole 10 mg	Partial remission	Aripiprazole 10 mg	Complete remission

the 6th month, the number of the patients who showed complete remission increased to eight (100%).

100 mg chlorpromazine equivalent doses for aripiprazole is 7.5 mg per day [10]. The mean chlorpromazine equivalent doses at the beginning of treatment, also at the third month and sixth month of the treatment is 158,33 ± 34,50 mg/day.

Discussion

The data is very limited for the effectiveness of second-generation antipsychotics in the treatment of DP. We present 8-case series of DP patients who were treated with aripiprazole. The gender characteristic of our sample was not consistent with previous observations that can be described as female predominance [6,11]. In our cases, five (%62.5%) of the patients were male. However, our cases consisted of older patients compatible with the previous literature [6,11].

All of our DP patients are primary DP, and none had any co-morbid psychiatric disorder. This is not compatible with literature, one meta-analysis about delusional parasitosis showed that 268 (%59.7) patients of the 449 patients were not "pure DP" [4].

Four (50%) of our patients had also essential hypertension diagnosis. This situation does not seem to be related to DP but seems to be related to patients' older age. In DP patients, literature shows that social isolation increases [12]. In our sample, four (50%) patients were not married and were living alone.

Cranial magnetic resonance imaging (MRI) studies of patients show that none of our patients show structural change of the brain or cortical atrophy like another study done in our clinic [7]. In one MRI study, it was shown that secondary DP cases had striatal lesions predominantly in putamen, thalamic or cortical lesions, subcortical white matter lesions mainly in the centrum semiovale, generalized brain atrophy, but primary DP case had none of these findings [13].

In a systematic review by Lepping et al, the typical antipsychotics achieve higher complete remission rates than atypical antipsychotics [9]. However, recent studies show that risperidone, olanzapine, aripiprazole, paliperidone, ziprasidone, and quetiapine had used as a treatment choice for DP and they seemed to be successful [1]. Some authors have suggested aripiprazole as a better drug due to its longer half-life and better side effect profile [14]. Aripiprazole has been reported to have fair efficacy in treating delusional parasitosis, with dosages ranging from 5 to 30 mg/day and improvements in two to eight weeks. Aripiprazole was chosen as a treatment of our DP patients. Full remission was achieved after the third month in seven patients, and after the sixth month in all of the patients. Due to the rapid remission of the psychotic status and the tolerability showed in our patients, we suggest that aripiprazole may be a suitable therapy to treat DP. Aripiprazole has advantages but the literature has limited evidence for using it as a treatment choice for DP. Based on our knowledge, cases in the literature were limited to case reports and all of them show the efficacy of the drug [14].

This study shows that aripiprazole can be a successful treatment choice for DP, but further studies are needed for this topic.

Acknowledgements

This report was presented in the 4th Psychiatry Summit- 11th Anxiety Congress and won the Aripiprazole poster prize.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

There is no funding for this research.

ORCID

İrem Ekmekçi Ertek http://orcid.org/0000-0002-7529-7123

References

[1] Campbell EH, Elston DM, Hawthorne JD, et al. Diagnosis and management of delusional parasitosis. J Am Acad Dermatol. 2019;80(5):1428–1434.
[2] SuP TW, Pan JY, et al. Delusion of parasitosis: a descriptive analysis of 88 patients at a Tertiary skin centre. Ann Acad Med Singap. 2018;47(7):266.
[3] American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. 5th ed.

Washington (DC): American Psychiatric Association Publishing; 2013.
[4] Trabert W. 100 years of delusional parasitosis. Psychopathology. 1995;28(5):238–246.
[5] Skott A. University of Göteborg^ dSt. Jörgen Hospital. Delusions of Infestation: Reports from the Psychiatric Research Centre. 1978.
[6] Lepping P, Huber M, Freudenmann RW. How to approach delusional infestation. Br Med J. 2015;350: h1328.
[7] Coşar B, Taşkinoğlu K, Lepping P, et al. Treatment options of delusional parasitosis: case series of 14 patients. Anatolian J Psychiatry. 2012;13:239–242.
[8] Altınöz AE, Tosun Altınöz Ş, Küçükkarapınar M, et al. Paliperidone: another treatment option for delusional parasitosis. Australas Psychiatry. 2014;22(6):576–578.
[9] Lepping P, Russell I, Freudenmann RW. Antipsychotic treatment of primary delusional parasitosis: systematic review. Br J Psychiatry. 2007;191(3):198–205.
[10] Danivas V, Venkatasubramanian G. Current perspectives on chlorpromazine equivalents: comparing apples and oranges!. Indian J Psychiatry. 2013;55 (2):207.
[11] Martins ACG, Mendes CP, Nico MM. Delusional infestation: a case series from a university dermatology center in São Paulo, Brazil. Int J Dermatol. 2016;55 (8):864–868.
[12] Nicolato R, Corrêa H, Romano-Silva MA, et al. Delusional parasitosis or Ekbom syndrome: a case series. Gen Hosp Psychiatry. 2006;28(1):85–87.
[13] Huber M, Karner M, Kirchler E, et al. Striatal lesions in delusional parasitosis revealed by magnetic resonance imaging. Prog Neuro-Psychoph Biol Psychia. 2008;32 (8):1967–1971.
[14] Ladizinski B, Busse KL, Bhutani T, et al. Aripiprazole as a viable alternative for treating delusions of parasitosis. J Drugs Dermatol: JDD. 2010;9(12):1531–1532.