

# Pattern of drug abuse in patients with psychogenic cough

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## ABSTRACT

**Objectives:** The present study was conducted with aims to find out the pattern of symptoms and drug abuse in patients suffering from psychogenic cough.

**Design:** A cross sectional descriptive study

**Place and duration of study:** A tertiary care teaching hospital

**Subjects and methods:** In the present study, a series of thirty two cases of psychogenic cough is reported.

**Results:** Of 32 cases, there were 19 females (59.4%) and 13 males (40.6%). A majority of patients had cough for more than one month. School phobia (in children) and fear of rejection and need for attention were the commonest precipitating or perpetuating factors. Seventeen patients (53.1%) had a psychiatric disorder, the commonest being conversion disorder (21.9%) followed by mixed anxiety and depressive disorder (12.5%). Drug therapy and/or psychotherapy were used as treatment with, 12 cases (37.5%) showing remission, 16 cases (50.0%) having improvement and 4 cases (12.5%) continuing with the complaint.

**Conclusion:** Psychogenic cough needs timely recognition and appropriate treatment to avoid drug abuse. Further studies are warranted to study the treatment and outcome of this important psychiatric disorder.

**Key words:** Psychogenic cough, Symptoms, Comorbidity, Drug abuse

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## INTRODUCTION

Psychogenic or “nervous” cough has generally been viewed as a clinical oddity and largely ignored by specialists text-books of medicine, psychiatry and otorhinolaryngology<sup>1-3</sup>. The different names given to it are listed in Table-1.

An automatic cough is a vagal sensory reflex occurring when irritant receptors located in the larynx, trachea or large bronchi are stimulated<sup>4</sup>. It is classified as a tic disorder which is defined as sudden, quick involuntary and frequently repeated movements of a physiological group of muscles that serve no apparent purpose<sup>5,6</sup>. Psychogenic or barking cough is defined as a respiratory tic. This nervous laryngeal cough or cry is emitted on an expiratory spasmodic contraction of the glottic adductors, repeated at frequent intervals during the day and generally ceasing during sleep. It consists of a short sharp, usually grating explosive cough that resembles the bark of a dog or the squeal of a puppy and as a rule can be resisted only for a time at the expense of painful emotion. There is no expectoration, no subsequent breathlessness or fatigue and no change in the voice. Great anger exercises a controlling influence, as does distraction, such as may be occasioned by a laryngeal examination. Spraying the larynx with a topical anaesthetic does not seem to affect the condition. The patient claims to be unable to repeat the cough when requested to do. A central feature in differentiating psychogenic from ordinary coughing is its unusual loudness<sup>7</sup>. It is usually croupy, barky and explosive and disappears during sleep. It is resistant to antitussive medications. A typical ‘chin on chest’ posture with the hand held to the neck while coughing may be noticed in some of the patients. The physical examination of the respiratory system as well as various routine investigations do not reveal any relevant abnormality. It may be precipitated by various factors such as social distress and withdrawal, dissatisfaction in family, an expression of hostility or self-punishment, an upward displacement of genital conflicts, a plea for assorted secondary gains, conflicts, over closeness, fear of rejection and need for attention<sup>8,9</sup>. To control psychogenic cough, different types of remedies are tried by the physicians as well as patients themselves putting them at the risk of adverse effects of medicines and at times abuse and dependence on them. Since there is paucity of literature on psychogenic cough but none on the pattern of drug abuse in it, the present study was undertaken with the aims to study the sociodemographic and clinical details of patients diagnosed as suffering from psychogenic cough and developed drug abuse or dependence on different cough suppressants.

## SUBJECTS AND METHODS

The present study was conducted in a tertiary care teaching hospital. All 25 consecutive cases of psychogenic coughing were studied over a period of three years (August 1999 to July 2002). The patients

were screened by the Otorhinolaryngologist and then referred to the Psychiatry outpatient department. All the patients were subjected to detailed history (on a semistructured proforma), physical examination and mental status examination (independently by two psychiatrists). The relevant blood and radiological investigations were done wherever required to assess physical status. Examination of the throat, nose and ear was done in every case to rule out the organic disease. The precipitating or exacerbating factors were also recorded. Patients having unreliable history and doubtful organicity were excluded. The nature of drugs abused by these patients was recorded. Comorbid psychiatric disorder was diagnosed and classified as per ICD-10 by WHO(1992). Sociodemographic and clinical details along with precipitating factors of psychogenic cough were analysed at the end of the study period.

## **RESULTS**

During the study period, 25 cases were diagnosed as suffering from psychogenic cough. Mean age was 28.2 years in males and 23.4 in females. There were 20 males (80.0%) and 5 females (20.0%) and majority of patients had the cough for more than six months (60%) (Table 2). Stress of work, fear of performance in examinations and interpersonal problems were the common precipitating or perpetuating factors.

The types of drug abuse seen were Dextromethorphan (32%), codeine (16%), noscapine(12%), promethazine (8%), diphenhydramine (8%), xylometazoline nasal drops(4%) and polydrug abuse(20%)(Table 2). Sixteen cases(64%) started drug abuse on the over-the-counter drugs and 9 cases due iatrogenic factors. The reasons given by the patients for continuation of these drugs are given in Table 2.

Six patients(24%) had conversion disorder, 6(24%) had mixed anxiety and depressive disorder, 5(20%) had generalized anxiety disorder, 2(4%) had adjustment disorder with depression, 1(4%) had phobic disorder and 5 cases(20%) did not have any comorbid psychiatric disorder.

## **DISCUSSION**

Although 'psychogenic cough' is not rare, very few detail descriptions are available in the published reports<sup>7,8,10</sup>. In most of the cases, diagnosis is delayed several weeks to several months because the physicians do not know about this psychogenic entity<sup>11</sup>. In the present study, majority of the patients (60%) had the duration of psychogenic cough of six months or more.

Psychogenic cough is usually regarded as a type of respiratory tic, that can be precipitated by various psychological problems<sup>10</sup>. In the present study, Stress of work, fear of performance in examinations and interpersonal problems were the main precipitating or perpetuating factors. These factors have also been reported in some of the previous studies<sup>11</sup>. In a study by Shuper et al<sup>5</sup> in 27% of the patients, there was a history of upper respiratory infection preceding the cough but in the present study, only four patients (16%) had a history of preceding upper respiratory tract infection.

Twenty patients (80%) had a psychiatric disorder. The commonest being conversion disorder (24%) followed by mixed anxiety and depressive disorder (24%) and generalized anxiety disorder (20%) Five cases (20%) did not have any overt psychiatric disorder(according to ICD-10).

Tranquilizers and cough suppressants are required only in complicated cases. At times, their withdrawal can precipitate coughing and provoke the patient to continue the drugs on chronic basis. There is no report of pattern of drug abuse in patients suffering from psychogenic cough.

Dextromethorphan was the commonest type of drug abuse (one patient was taking about 30-40 tablets containing dextromethorphan.). Dextromethorphan abuse and dependence has also been reported in previous studies<sup>12,13</sup>. The abuse of other compounds used in cough syrups, tablets and nasal drops e.g. codeine, noscapine, antihistaminics and nasal drops had been reported<sup>14,15</sup>.

The pattern of drug abuse indicates that the so-called safer drugs are not without abuse and dependence potential and needs control over the availability and prescription. Physicians and patients should be familiar with the possibility of psychogenic factors in the etiology of persistent cough. Early recognition and appropriate treatment can minimize the secondary complications and eliminate troublesome unnecessary extensive and expensive investigations and inappropriate prolonged treatment.

**Table-I. Different names for Psychogenic Cough**

Psychogenic Cough tic	Nervous Cough	Tussis nervosa
Habit Cough	Operant Cough	Barking Cough of puberty
Honking	The bark of hysteria	Expiratory tic
Dora's cough		

**Table 2 : Pattern of Drug Abuse in Patients with Psychogenic cough**

Drug abused	N (%)	Duration(months)	Reasons for continuation (given by patients)
Dextromethorphan	6 (32)	3 -12	Cough;fear of withdrawal cough;anxiety
Codeine	4 (16)	6 -15	Irritation in throat; anxiety
Noscapine	3 (12)	1 – 9	Irritation in throat; fear of withdrawal cough
Promethazine	2 (8)	3 – 12	Fear of withdrawal cough;Sedation
Diphenhydramine	2 (8)	1 – 6	Sedation;fear of cough
Xylometazoline nasal drops	1 (4)	10	Sneezing;cough;withdrawal nasal dripping
Poly drug abuse(codeine,dextromethorphan,promethazine)	5 (20)	8 – 30	Anxiety;fear of withdrawal cough;throat irritation

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