

CORRESPONDENCE

Psychogenic and functional disorders of the respiratory tract in children and adolescents – a pilot study

To the Editors,

Psychogenic and functional breathing disorders represent a variety of disease patterns, which can be allocated to the ICD-10 classification of 'Somatoform autonomic dysfunction of the respiratory tract' (F45.33). These clinical entities are still underdiagnosed although they represent important differential diagnoses to organic airway diseases such as bronchial asthma (1–3). Furthermore, both psychogenic and functional breathing disorders as well as organic disease may coincide in one patient (4, 5).

Examples of psychogenic breathing disorders include sighing dyspnoea, hyperventilation and panic attacks accompanied with dyspnoea, while functional breathing is attributed to entities such as vocal cord dysfunction (VCD). Visible and audible paradoxical vocal cord movements with a psychological background characterize the latter.

Very little epidemiological data are available for these clinical entities (6). To our knowledge, there is no information about population-based figures. Aim of this pilot study was to deliver descriptive data on the distribution and characteristics of psychogenic and functional breathing disorders in a specialized outpatient department for paediatric allergology and pneumology.

We recruited 132 children and adolescents, consecutively seen in the outpatient department between October 2007 and June 2011. The only inclusion criterion was the physician-based diagnosis with ICD-10 F45.33 (7, 8). Seventy-four (56%) were females, 58 (44%) males and median age was 10.5 yr (ranging from 3 to 18 yr).

The Table 1 shows the percentages of the eight diagnosed clinical entities. Habit cough was the most common diagnosis. Although vocal cord dysfunction has been known for

years and many cases have been published, it is rare compared to the other entities. In 15 (11%) patients, a combination of two or more of the entities (e.g. habit cough plus tic-like disorder or sighing dyspnoea plus hyperventilation) was diagnosed.

Age distribution showed an implied tendency towards two peaks: one between 7 and 11 yr with a predominance in boys, and a second peak between 7 and 17 in favour of girls (Fig. 1). Habit cough seems to be more common in younger boys and pure psychogenic breathings disorders more common in older girls.

Trigger factors were mentioned by 40 (30%) of patients. Physical exercise was the most common reported trigger factor

Table 1 Distribution of psychogenic and functional breathing disorders in children and adolescents

Diagnosis	Patient numbers (%)	Female (%)/ male	Median age (yr)
Habitual cough	38 (29)	18/20 (47%)	8.5
Pure psychogenic breathing disorders	25 (19)	15/10 (60%)	11.5
Functional disorders (including VCD)	19 (14)	15/4 (78%)	12.0
Tic-like disorders	13 (10)	4/9 (30%)	8.0
Sighing dyspnoea	18 (14)	8/10 (44%)	9.5
Paroxysmal sneezing	2 (2)	2/0 (100%)	14.5
Hyperventilation	1 (<1)	1/0 (100%)	10.0
Thorax pain	1 (<1)	1/0 (100%)	12.5
Combinations	15 (11)	10/5 (67%)	8.5
Total	132 (100)	74/58 (56%)	10.5

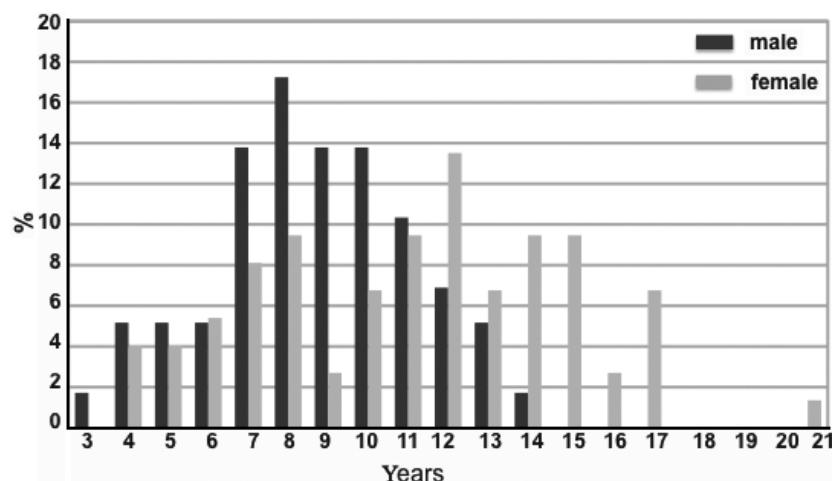


Fig 1 Age distribution according to sex.

(36 patients, 90%). The remaining four patients (10%) reported respiratory infections or emotional stress. In seven patients (5%), the admission diagnosis of bronchial asthma was corrected to psychogenic and functional breathing disorder and antiasthmatic treatment was stopped.

The basis of such data is the underlying diagnostic criteria. We classified patients according to criteria elaborated by our group previously (7, 8). However, prospective validation of criteria is still warranted.

Most patients presenting with psychogenic and functional disorders do not show typical trigger factors for their symptoms, which seem to be one of the diagnostic criteria to characterizing this group of diseases. Of the mentioned trigger factors, physical exercise is the most common. However, physical exercise is not indicative but unspecific and is seen in diverging disorders such as bronchial hyperresponsiveness, bronchial asthma, vocal cord dysfunction, pure psychogenic breathing disorders or lack of training.

In conclusion, our data for the first time show distribution and age patterns of psychogenic and functional breathing disorders in childhood and adolescence in a paediatric allergy/pneumology department. This may be an impulse for the validation of diagnostic criteria and the first step towards prospective studies. Looking ahead, this should be followed by studies on the catamnesis of these patients.

Conflict of Interest

None declared.

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