Chapter 6

HICCUP

Hüseyin Fatih SEZER[1]

DESCRIPTION AND GENERAL FEATURES

Hiccup is a rhythmic sound that occurs as a result of involuntary contraction of the respiratory muscles and the closure of the airway entrance. It has no physiological function [1,2]. According to some authors, it is the reflex to protect the respiratory tract from gastric aspiration [3]. It can be seen in all age groups. It even starts in the intrauterine period, and its frequency gradually decreases from the neonatal period until the age of 1 year [4]. It can get annoying sometimes and it can create restrictions in people social life. Even the death of a person was associated with hiccups [5,6]. Usually occurs at fixed intervals and on average 6-12 times per minute [7]. It can repeats up to 60 times per minute [8]. It usually resolves spontaneously in a short time without treatment. When it is prolonged and persistent, it becomes pathological. The longest known hiccup lasted 69 years and 9 months, listed in the Guinness Book of World Records [6,9].

EPIDEMIOLOGY

There is no sufficient information about its actual incidence and its relation to demographic characteristics [7,8]. Studies on the subject are individual case reports or studies with a limited number of patients [10]. The rate of hospitalization in hiccup cases was reported as 0.054% [6]. In the United States, 4000 people per year are thought to be hospitalized for severe hiccups [5,9]. Generally, it is expected to be more common in the male gender and those with comorbid diseases [10]. More than 90% of patients in studies are men gender [5,9]. Psychogenic hiccups are more common in female gender [4,9]. Its incidence is expected to increase with age [4]. It is more common especially in patients with gastrointestinal and central nervous system diseases [9]. Its incidence is reported as 3.9-4.5% in cancer patients and 8-10% in patients with gastroesophageal reflux [6]. In studies, it has been reported that recurrent hiccups are observed in more than 20% of Parkinson's patients and more than 10% in gastric reflux patients and 3% in the control group [9,11].

[1] Assistant Professor, Kocaeli University, hfs.hfs@gmail.com.

holding, breathing by closing the nose, movements that increase carbon dioxide such as the Valsalva manoeuvre, some methods with reducing nasopharyngeal irritation such as drinking water and ice application, washing the face with cold water, some manoeuvres reducing diaphragm irritation such as pulling the knees to the chest [8,10].

Table 2: Physical Maneuvers and Therapies for Acute Hiccups Attack		
Nasopharyngeal or Esophagal Stimulation	**Respiratory Manoeuvres**	**Vagal Stimulation**
Sugar swallowing	Breath-holding	Carotid massage
Ammonia Inhalation	Valsalva manoeuvres	Cold compress
Lemon biting	Maximal inspiration	Frighting the patient
Stimulation with ice water		
Intranasal vinegar application		

In cases that it is resistant, if there is an underlying organic cause, that situation should be tried to be corrected first. However, a definitive organic disorder may not be detected. As a medical treatment, treatment with many active substances has been reported. In the choice of medical treatment, physicians tend to start treatment according to their experience and specialities [10]. Chlorpromazine (the only FDA approved drug), metoclopramide, gabapentin, benzodiazepine, baclofen can be used [10]. In some individual case reports, intradermal injection of a mixture of thiocolchicoside and lidocaine has been reported to be beneficial [8]. Decompression of the vagal nerve may be considered in cases resistant to medical therapy. It has been reported that an epidural block has been applied to C3-5 [9]. The phrenic nerve can be blocked temporarily with the help of anaesthetic agents or radiofrequency [16]. Studies are reporting the use of a diaphragm-stimulating pacemaker [7]. The last resort is denervation of the phrenic nerve [1]. It has been reported that acupuncture [10] or hypnosis is used among alternative medicine methods.

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