



## RESEARCH ARTICLE

# Invasion of Wind and Cold as Cause of Respiratory Tract Infection Outbreak in a School Kinder Garden Group of Kids

Huang W. L.\*

MD Infectious Disease Specialist (ID Specialist), General Practitioner, Nutrition Doctor, Acupuncturist, Pain Management, MedicalAcupuncture and Pain Management Clinic, Franca, Sao Paulo, Brazil.

### Abstract

**Introduction:** According to Western medicine, upper respiratory tract infection (URTI) is a complex symptom usually caused by several families of virus. According to Traditional Chinese Medicine (TCM), these pathologies are linked to invasion of external pathogenic factors such as Wind, Cold, Dryness, Dampness, and Heat.

**Purpose:** To demonstrate that not all upper respiratory tract infections are caused by virus or bacteria but due to invasion of Wind and Cold.

**Methods:** The teacher was performing acupuncture treatment, and complained with the author (her doctor) about her sixteen students (ages around 4-5 years old). Around 50% of them were all happening to get sick at the same time, with coryza, fever, cough and secretion in the nose. The physician asked her several questions, such as how was the use and frequency of air conditioner or fan inside the classroom or if the kids were playing in the cold ground. The teacher said there was a ceiling fan always turned-on in the classroom. The physician oriented her to turn it off to see if the kids would improve from their symptoms.

**Results:** As soon as the fan stopped being used, all the sick kids presented improvement of their symptoms.

**Conclusion:** Not all upper respiratory tract infections can be considered caused by virus or bacteria. It is important to acknowledge that the external pathogenic factors could be responsible for the outbreak in this case. According to TCM, the invasion of Cold and Wind is the main cause responsible for the start of upper respiratory tract infections. It is necessary to include these factors as possible causative agents to perform prevention, and treat adequately, to avoid relapses.

**Keywords:** Cold and Wind Invasion, Infectious Disease Outbreak, Children, Vaccine, External Pathogenic Factors, Traditional Chinese Medicine, Acupuncture, Chinese Dietary Counseling

### Introduction

Over recent decades, the number of children in day-cares, kinder gardens and schools have been increasing significantly all over the world. This increase in out-of-home child care, according to Western Medicine, has a reflex in infectious diseases behavior [1-3]. Western medicine comprehends this reflects in increased risk of acquiring infectious diseases to which those involved in this care are exposed, which has been widely recognized as a public health problem. The study written by Maria M. M. Nestil and Moises Goldbaum entitled Infectious diseases and daycare and preschool education, states that out-of-home care for preschool age children are environments with special epidemiological characteristics, as they have populations with characteristic profile and with specific risks for the transmission of infectious diseases [3]. The small airways of young children can be significantly narrowed by inflammation and mucus, making breathing difficult, and these infections are more common in children in day-cares, as children have an immature immune system, according to Western medicine [4]. Traditional Chinese Medicine (TCM), on the other hand, have a broader view of the development of diseases and symptoms. In the case

of respiratory tract infections, in TCM, they are associated with invasion of Wind and Cold, related to weak Zheng Qi [5]. The difference between Western and Traditional Chinese Medicine is that Western medicine does not address the influence of the external pathogenic factors as a cause of respiratory tract infections. The author proposes a wider perspective and demonstrates that the deep comprehension of the origin of the diseases on the energy level is important for proper orientation of the patient, treating and preventing new episodes [6-11].

### Purpose:

To demonstrate that not all upper respiratory tract infections are caused by virus or bacteria, but they can be caused by invasion of external pathogenic factors, mainly Wind and Cold.

\*Correspondence to: Huang W. L. MD Infectious Disease Specialist (ID Specialist), General Practitioner, Nutrition Doctor, Acupuncturist, Pain Management, MedicalAcupuncture and Pain Management Clinic, Franca, Sao Paulo, Brazil. Email: weilingmg[AT]gmail[DOT]com

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## Methods:

This study was based on review of literature of what is known nowadays regarding outbreaks of upper respiratory tract infectious in groups of children in day-care and other facilities outside home. It was also used a clinical case of a teacher of who had 16 students (ages around 4 and 5 years) all happening to get sick at the same time, with coryza, fever, cough and secretion in the nose.

## Case Report:

A teacher named M. B, pedagogue for around 20 years, was performing treatment with acupuncture for unrelated symptoms. She had 16 students in her class, all aged around 4 to 5 years old. During her treatment, she described that around 50% of her students were sick at the same time. During June, a period of winter in Brazil, where there is a considerable cold weather on the countryside of São Paulo, where the school is located, 8 of the 16 children had upper respiratory tract infections almost at the same time. Their symptoms were: coryza, fever, cough and secretion on the nose. The recommendation the school received was to vaccinate all the children with flu shots. The doctor who was performing the acupuncture sessions on the teacher, questioned if the classroom had a fan or used air conditioner, or if the kids would play sitting directly on the cold floor. She answered that yes, that there was a ceiling fan on the middle of the classroom, constantly on during the day. From the perspective of Traditional Chinese Medicine, the outbreak could be caused by invasion of the pathogenic factor of Cold and Wind. Using this reasoning, it was noticed that the room where the children stayed during the day had a ceiling fan constantly turned on, and that the children would play sitting directly on the cold floor. The author (the doctor of the teacher) suggested to turn off the fan and observe what would happen to the state of health of the children.

## Results

On the following acupuncture session, a week later, the teacher commented that with the measure of turning off the fan, all the sick children recovered, solving the crisis without the necessity of vaccinating the whole classroom.

## Discussion

According to Western Medicine, respiratory tract infections are the most common infections in children. They are even more common in children that go into daycare and/or have siblings. The common symptoms are runny nose, sore throat, red eyes, hoarseness, coughing, fever, and swollen lymph nodes. In Western medicine, there is also evidence that the exposure to cold can cause respiratory tract infections. In a study from 2007, entitled *Exposure to cold and respiratory tract infections*, it is stated that exposure to cold has often been associated with increased incidence and severity of respiratory tract infections, as well as the winter months have been associated with increased mortality through cardiovascular diseases and respiratory tract infections [12]. Another study from 2015, from Eccles, entitled *Exposure to cold and acute upper respiratory tract infection*, states that the incidence

of acute upper respiratory tract viral infections is directly correlated to air temperature with most upper respiratory tract infections occurring seasonally in cold weather[13]. Western medicine and traditional Chinese medicine use different reasoning. In traditional Chinese medicine, the focus when treating and diagnosis patients is to consider and address the importance of the dynamic balance between four basic energies: *Yin*, *Yang*, *Qi* and Blood. The imbalance between these energies will further imbalance the massive organs of the Five Elements theory, previously exposed by the author in several other articles. This energy system, when imbalanced, will make the person more vulnerable to invasion of external pathogenic factors, thus leading to vulnerability to the formation of symptoms and diseases such as upper respiratory tract infections. The metaphor of tree plays a very important role on the comprehension of the reasoning used by the author, this is why the metaphor is exposed in (Figure 1). Around the tree, it is possible to see the five external pathogenic factors.

They are: Wind, Cold, Humidity, Heat and Dryness.

In TCM, these external pathogenic factors are believed to invade when the body of the patient's is weakened in energy (*Zheng Qi*). The tree has a trunk with several branches. Each branch represents one medical specialty and each leaf coming out of each branch represent the symptoms and diseases of each specialty. The leaves and the branches are the visible part and the object of study and practice in the Western medical profession. The focus is to treat each leaf in each specialty. Upper respiratory tract infections in children are on the leaf of pediatrics or pneumology. The treatment proposed by the author is focused in two steps. The first is to consider that the invasion of external pathogenic factor could influence the health state of the child, and that the treatment to take out the external pathogenic factors, causing the respiratory symptoms on children is important. The second is to treat the energy imbalances that according to the author reasoning are located at the root of the tree, this step is important to fortify the energy of each patient to improve *Zheng Qi*, maintain the body stronger against the invasion of Cold, improving symptoms. On this case report, from 16 children in the classroom, 8 got sick, and 8 did not get sick even with the exposure to Cold and Wind.

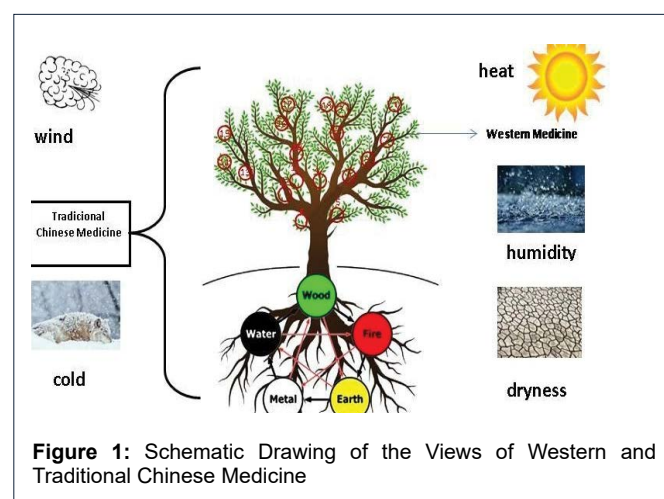
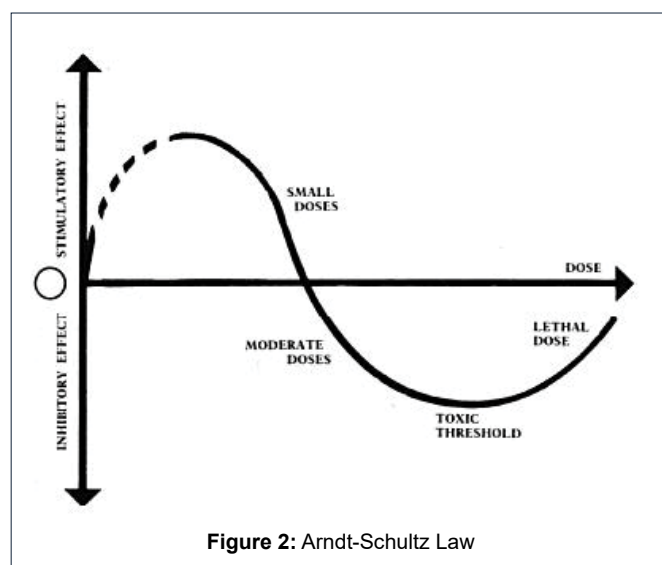


Figure 1: Schematic Drawing of the Views of Western and Traditional Chinese Medicine

It is probable that the kids who did not get sick, had stronger *Zheng Qi* than the kids who did. The reason for that relation can be explained by the concept of *Zheng Qi* in Traditional Chinese Medicine. Traditional Chinese Medicine literature understand *Zheng Qi* as the ability of the organism to protect itself from the influences of the external pathogenic factors, exposed in (Figure 1), as well as the ability of the organism to recover after damaging influences or energy imbalances caused by emotional distress or a bad diet. *Zheng Qi* is formed with the constitutional energy of the Kidney meridian and is part inherited from the parents and part acquired from diet. The children who did not get sick probably have parents with stronger energy associated with a healthy diet, and the children who got sick probably had inherited weak energy from their parents, accompanied by an unhealthy diet. On the article entitled *The Concept of Wind in Traditional Chinese Medicine*, the concept of *Zheng Qi* is defined as “the capacity of the body to resist different pathogenic factors and maintain relative balance inside the body in relation with the outside world”. The *Zheng Qi* capacity is related to a state of dynamic balance between the four energies *Yin*, *Yang*, *Qi* and Blood. The basic concepts of Traditional Chinese Medicine have been deeply discussed in previous articles of the author. The energy imbalances between these four basic energies, as well as the energy deficiencies of the chakras are believed to harm the *Zheng Qi* of the body, making the body more prompt to attacks of external pathogenic factors. On this same article, important considerations regarding the concept of Wind in Traditional Chinese Medicine are made. Wind is one of five climates that characterize the five seasons according to TCM. Heat occurs in summer, Humidity in late summer, Drought in autumn, and Cold and Wind in winter and spring. While Wind is present in all seasons, its manifestation will be stronger in the season that matches it. Wind can appear as Cold Wind, Hot Wind or Damp Wind, depending on the season. The outbreak on the school happened in June, which corresponds to winter in Brazil. Cold Wind is an aversion to wind and chill and is accompanied by fever, headaches and generalized aches, a runny nose, and a cough, occurring on the winter and spring. Hot Wind is accompanied by fever, sweating, headaches, red eyes, sore throat, photosensitivity, thirst, a cough with yellow and dense sputum, respiratory problems, constipation, and epistaxis, occurring on the summer. Damp Wind has effects similar to those of the common cold, with sore limbs, listlessness, nausea, anorexia, and diarrhea and can cause diseases like arthritis, appearing on autumn. Wind in the body resembles the wind in nature; thus, it generates both movement and movement in what would otherwise remain motionless. It is considered the basis of several diseases in Traditional Chinese Medicine. The treatment based on avoiding and being aware of the influence of external pathogenic factors, mainly Cold and Wind, also aims to avoid the use of high-concentrated medications, as a recommendation of the author. This choice was based on the Arndt-Schultz law, originally formulated in 1888, states the effects of different drug concentrations on an individual basis, (Figure 2). The rule states that for all substances, small doses stimulate, moderate doses inhibit and overdoses kill. According

to this law, highly diluted drugs improve organic processes, while high concentrations harm health. In the case of prescription drugs with high concentrations, in any case, they will be reducing the vital energy, worsening their *Zheng Qi*, making them more prone to invasion of external pathogenic factors, maintaining the disease, and making their prone to acquiring other diseases in the future. According to the Arndt-Schultz law and the author experience, all chronic diseases are caused by energy deficiencies. Besides, it is very important to avoid a treatment that drops the vital energy of the children, as, according to the author, a drop on the vital energy may lead to disturbances in growth, sleep, memory, intelligence, concentration, emotional state, or in other parts of the children development. According to Hippocrates: “First, do no harm”. Currently, Western and Traditional Chinese Medicine are different for most physicians around the world. However, they can be integrated. In (Figure 3), a metaphor of *Yin* and *Yang* as the different kinds of medicine was created. For the adequate treatment of upper respiratory tract infections in children it is important to associate Traditional Chinese Medicine and Western medicine reasoning, so the patient can treat the symptoms and the root of the problem, which are the invasion of external pathogenic factors, mainly Cold and Wind, in a weak body.



## Conclusion

Not all upper respiratory tract infections can be considered caused by virus or bacteria. It is important to acknowledge the external pathogenic factors, responsible for the outbreak in the kids' school. According to TCM, the invasion of Cold and Wind caused by use of ceiling fan in the classroom was the main cause responsible for the start of upper respiratory tract infections, and when the use of ceiling fan was stopped, the infections stopped occurring. It is necessary to include these factors as possible causative agents of upper respiratory tract infection in children, to prevent and treat adequately, to avoid relapses.

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