# How respiratory diseases were treated at the beginning of the 19<sup>th</sup> century

# Jak leczono choroby układu oddechowego w początkach XIX wieku?

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Studia Medyczne 2014; 30 (2): 131-133

**Key words:** respiratory diseases, humoral theory, history of medicine.

Słowa kluczowe: choroby układu oddechowego, teoria humoralna, historia medycyny.

#### Abstract

Respiratory diseases were quite common in the past. A treatment procedure for an acute respiratory disorder, most probably pneumonia, in a 72-year-old man was presented based on archival source materials dating from 1801. The treatment was provided by a doctor, barber surgeon "nurse" and pharmacist, who were practicing in Koniecpol in 1801. The patient was given mucolytic, antitussive, cardiac, antipyretic and analgesic medications and appetite stimulants. From the medical point of view that prevailed at that time, the treatment was correct. The patient was also given medications recommended under the humoral theory, which was still being followed at that time. According to that theory, the human body was thought to contain four humours: blood, phlegm, yellow bile and black bile. An imbalance of humours resulted in a disease. The treatment was designed to restore the proper humoral balance by techniques such as enemas, diuretics and bloodletting. From the present medical point of view, the treatment was incorrect. It caused anaemia and disturbances in water, electrolyte and acid-base homeostasis. The treatment resulted in the patient's death. However, one can hardly blame doctor Tichi, as his treatment was fully compliant with the scientific views prevailing at that time.

# Streszczenie

Schorzenia dróg oddechowych należały do częstych chorób, także w przeszłości. Na podstawie archiwalnych materiałów źródłowych z 1801 r. przedstawiono przypadek leczenia ostrego schorzenia dróg oddechowych, prawdopodobnie zapalenia płuc, u 72-letniego mężczyzny. W skład zespołu leczącego wchodził doktor, cyrulik, ówczesna "pielęgniarka", aptekarz, którzy praktykowali w 1801 r. w Koniecpolu. W leczeniu zastosowano leki mukolityczne, przeciwkaszlowe, nasercowe, przeciwgorączkowe, przeciwbólowe, poprawiające apetyt. Leczenie to z punktu widzenia współczesnej medycyny było prawidłowe. Zastosowano także leki, które zalecała obowiązująca od starożytności teoria humoralna. Teoria ta zakładała istnienie w ciele człowieka czterech płynów – humorów: krwi, śluzu, żółci, czarnej żółci. Brak równowagi między płynami prowadził do choroby. Leczenie miało na celu przywrócenie zaburzonej równowagi przez stosowanie leków przeczyszczających, moczopędnych, upustów krwi itp. Z punktu widzenia współczesnej medycyny było to leczenie szkodliwe, powodujące niedokrwistość, zaburzenia homeostazy wodnej, elektrolitowej i kwasowo-zasadowej. Leczenie zakończyło się zgonem chorego. Nie można jednak mieć zastrzeżeń do ówczesnego doktora koniecpolskiego Tichiego, gdyż leczył zgodnie z aktualnymi poglądami naukowymi.

#### Introduction

In 1981, respiratory diseases were the third most common cause of death and accounted for 10.3% of all deaths in Poland. Pneumonia accounted for 38.2% of the deaths caused by respiratory disorders. The mortality rate was the highest among persons aged over 65 [1].

Respiratory diseases have plagued humanity throughout its entire history [2]. During a search in the Kielce Diocese Archive (ADK), records kept by the Krakow General Consistory were found. They dated back to 1801 and pertained to the case of Antoni Jarzęcki, a Secemin parish priest who died of an acute respiratory disease [3].

Rev. Antoni Jarzęcki was born in 1729 in the Gniezno archdiocese. He was preliminarily ordained to the priesthood on 18 March, 1759, in Krakow to become a subdeacon on 5 April, 1760, a deacon on 31 May, 1760, and a presbyter on 22 June, 1760. On 24 March, 1760, he was vested with the *tituli Annuntiationis* BMV in Szczepanów, in the Wojnicz Deanship [4]. From 2 March, 1766, until 1801 he was a canon of the All Saints' Collegiate Chapter in Krakow. From 10 July, 1769, until 1784 he acted as a scholastic in Mstyczów. In the period from 5 April, 1770, until 1796 he was the head of the Czaple parish to subsequently become the parish priest in Secemin in the years 1762–1801. He died in 1801 [5].

The records show that the priest was treated for a respiratory disease, most probably pneumonia. This information was given in annexes 1–3. The text of the annexes has been prepared pursuant to the instruction on how to analyse and quote old Polish source texts [6].

### Case description

Rev. Jarzęcki fell ill at the beginning of March 1801, at the age of 72. The disease manifested itself by cough, sputum production, fever, lack of appetite and weakness.

The patient was treated by doctor Tichi, who was practicing in Koniecpol. He was helped by a barber surgeon named Jakub and an unknown Jewish woman.

The patient was prescribed mucolytics, antipyretics, analysics and appetite stimulants along with cardiac, diuretic and purgative medications, which were all of plant origin and used in conjunction with amber. The medicines were taken orally in the form of mixtures and juleps as well as rectally (enemas).

The treatment was not successful and the patient died on 7 April, 1801 [3]. The costs of treatment were PLN 114 and included a doctor's fee of PLN 54 and costs of medicines of PLN 50. The barber surgeon and the woman were paid PLN 6 and PLN 4, respectively.

#### **Analysis**

With the details given in the "Records of the General Consistory of the Kraków Diocese" and, specifically, the list of medicines used for the treatment of Rev. Jarzęcki, the course of treatment can be reconstructed quite precisely. Even without any information being given directly by doctor Tichi, it can be safely assumed that the priest suffered from an acute lower respiratory tract infection. The treatment was consistent with the then prevailing humoral theory.

The humoral theory was developed by ancient physicians and philosophers: Empedocles of Acragas (490–430 BC), Diogenes of Apollonia (6<sup>th</sup> Century BC), Hippocrates of Cos (ca. 460–377 BC), Plato (427–347 BC), Aristotle of Stagira (384–322 BC), Galen (131–201)

and others. This theory posited the existence of four bodily fluids, i.e. humours, in a person. These were blood, phlegm, yellow bile and black bile. The quantity and quality of the humours were correct when a person was healthy. A disease would impair the quantity and quality of humours or pollute them. The treatment was aimed at restoring the balance lost as a result of the disease or removing harmful juices or substances [7]. The remedies included the following: dietary measures to clean the bodily fluids, laxatives as enemas as well as emetics for "lower" and "upper" cleaning, respectively, diuretics and diaphoretics, which were designed to remove harmful substances, letting blood from peripheral veins and applying "dry" or "cut" cups, as well as using leeches [8].

In the case at hand, medications affecting the respiratory systems ("cough mixture", "juleps" to thin the bronchial secretion) were used along with cardiac medication ("heart strengthening potion"), antipyretics ("fever mixture"), analgesics ("anodyne") and appetite stimulants ("appetite stimulating medicine"). From the present medical point of view, such treatment was correct. However, in addition to these medicines, other remedies were given, as recommended under the humoral theory. These included purgatives ("laxuiqca mixture"), enemas ("enema herbs", asafoetida), diuretics ("mixture to induce urination") and diaphoretics ("tisane" instead of tea). Given that the barber surgeon was involved in each treatment procedure, it can be assumed that the patient was subject to bloodletting, and perhaps also hot cups were applied. Cautious use of purgatives might have been necessary as constipation is quite common in bedridden patients. Similarly, a reasonable application of the "mixture to induce urination" might have been helpful when treating patients with heart failure, which often occurs in elderly patients especially in the case of pneumonia. An excessive use of such measures, especially, laxatives, frequent enemas and probably bloodletting, were harmful from today's medical point of view as it resulted in anaemia and disturbed the water, electrolyte and acid-base homeostasis.

The patient died after 4 weeks of treatment. Now-adays, pneumonia might result in the death of elderly patients, despite antibiotics being used. To sum up, the treatment provided to Rev. Jarzęcki by Dr Tichi from Koniecpol complied with the scientific views prevailing at that time.

Interestingly, the records contained information about the costs of treatment, which amounted to PLN 114. It was quite a large sum of money. In 1765, a cow could be bought for PLN 52 [9]. Personal costs of treatment and costs of medicines accounted for 56% and 44%, respectively.

It is also worth noting that the treatment was provided by a team. The medical team consisted of a doctor, barber surgeon, "nurse" and pharmacist.

#### **Conclusions**

At the beginning of the 19<sup>th</sup> century the treatment of respiratory tract diseases was provided in accordance with the humoral theory prevailing from antiquity.

[free English translation of annexes written in old Polish]

#### Annex 1

[p. 20] I, the undersigned, represent that I collected three red zlotys, as confirmed herein, in Koniecpol on 10 July, 1801, for providing help and assistance for four weeks to the late canon Jarzęcki from Rev. Karol Kuleszyński, dean priest of Kurzelów. This is certified with the present document, drawn up in Koniecpol on 10 July, 1801. Tichi.

#### Annex 2

[p. 15] List of all expenses incurred after death of the late Antoni Jarzęcki, Secemin parish priest, by Karol Kuleszyński [...] filed on 12 April 1801.

For medicines provided by the Koniecpol pharmacy during the disease, PLN 50.

To Honourable Mr Tychi, doctor for assisting the late Rev. Jarzęcki, PLN 54.

To Jakub, barber surgeon from Koniecpol, for services provided to the late Antoni Jarzęcki in disease, 6 PLN.

To the Jewish woman for administering enemas to the late Antoni Jarzęcki, PLN 4.

To the Jewish woman for prunes for the late Antoni Jarzęcki, PLN 1.10.

#### Annex 3

[p. 19] List of medications administered to Rev. Jarzęcki, parish priest in Secemin

1001		
0 = 6	Cough mixture	PLN 1.18
item	Mixtura laxuiqca f. 4	
	D 10 repeated	PLN 8
	Tisane to drink instead	
	of tea gr 15 Amber	
	gr 15	PLN 1
13	Mixtura laxuiqca and	
	Diuretic mixture f 3	
	gr 12 other	
	Cough mixture f 2	
	gr 6 D 18 repeated	
	Julep to thin phlegm f 2	
	repeated four times	PLN 17.24
22	Mixtura laxuiqca	PLN 3.12
item	Appetite stimulating droplets	
	gr 24, 4 times	
	repeated	PLN 8.6
25	Cough mixture	PLN 3

30	Fever and cough mixture	PLN 2
Apr 1	Cough mixture	PLN 1.18
7	Anodyne f 1. Heart strengthening potion	
	f 1. Julep f 1	PLN 3
	Enema weeds	PLN 0.24
	Asafoetida f 1	PLN 1.24
		Total PLN 46.12

Koniecpol D. 13 Apr. 1801 Jan Onufry Nowicki

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