

# MEDICINAL USE OF APPLE CIDER: A HISTORICAL COMPENDIUM\*

Christiane Staiger\*\*

In most of the world cider is an alcoholic drink made from fermented apple juice. It comes in a variety of tastes, from sweet to dry and in a range from 4 to 8% of alcohol by volume.

In the United Kingdom cider is predominantly made in the southwest and the west of England.<sup>1</sup> Modern, mass-produced ciders are generally heavily processed and resemble sparkling wine in appearance. More-traditional brands, often known as *scrumpy*, tend to be darker and more cloudy, as less of the apple is filtered out.

French *cidre* is an alcoholic drink produced predominantly in Normandy and Brittany. Most qualities are usually sparkling. Until the mid-20th century, *cidre* was the second most-consumed drink in France after wine, before the popularity of beer increased. In restaurants in Brittany, cider is sometimes served in traditional ceramic bowls or wide cups rather than glasses.

German cider, usually called *Apfelwein* - or with a more dialect pronunciation *Ebbelwoi* - has a tart, sour taste and an alcohol content of 5,5-7%.<sup>2</sup> It is mainly produced and consumed in Hessen, particularly in the Frankfurt area, but also common in Baden, the area around Trier, and the lower Saar area. In the latter regions it is called *Apfelmost* or *Viez* (from the Latin word *vice*, meaning the second or substitute wine).

Next to the German border, in Luxembourg *viez* is rather like English scrumpy. It is cloudy, made only in autumn and varies from non-alcoholic to very alcoholic.

In Spain, the regions of Asturias and the Basque Country are well known for traditional *sidra*, an alcoholic cider of 4 to 8% strength. *Sidra* is traditionally poured in very small quantities from a height into a wide glass, with one arm holding the bottle extended upwards and the other holding the glass extended

---

\* Slightly revised version of an article first published in *Pharmaceutical Historian* 35 (2005): 38-41, with kind permission of the editor.

\*\* ch.staiger@gmx.de

<sup>1</sup> French, Roger Kenneth, *The history and virtues of cyder*. New York, London 1982.

<sup>2</sup> Schad, Hermann, *Der Aepfelwein und seine Geschichte*. Bad Soden, no year.

downwards. This is called to *escanciar* and is done to get air bubbles into the drink, thus giving it a sparkling taste that lasts a very short time.

Varieties of cider are known also in Slovenia (*Jablocnik*) and Finland (*Siideri*). In Australia, 'cider' can be either an alcoholic drink as described before, or a sparkling non-alcoholic beverage made from apples. Cider in Japan and Korea sometimes means just a soft drink, not necessarily made from apples.

Considering the wide distribution of cider it is not surprising that it has a long tradition, not only as a beverage but also in folk medicine for the treatment and prophylaxis of several human and veterinary disorders.<sup>3</sup> In Britain and Germany, we find multiple historical examples of its medical application.

### *Scurvy*

Cider was part of the early therapy of scurvy before lemons became the first-line naval prophylaxis and treatment.<sup>4</sup> It was James Lind, born in Edinburgh in 1716, who made it into the history books with his findings, that citrus fruits were the most effective treatment for scurvy and an excellent prophylaxis for the sailors. Lind registered in 1731 as an apprentice at the College of Surgeons in Edinburgh and after eight years began serving as a naval surgeon in the Mediterranean. Until 1748 he was active around Guinea and the West Indies, although he spent most of his time patrolling the English Channel.

In 1747, on the HMS Salisbury at sea, Lind made his well-known experiment.<sup>5</sup> He selected twelve men from the ship, all suffering from similar symptoms of scurvy, and divided them into six pairs. He then gave each group different additions to their basic diet. All of them were recommended at that time to keep scurvy at bay, but Lind thought of a direct comparison to find out which might be the best. In his study, two men received a quart of cider a day, and two others took twenty five gits of elixir vitriol three times a day upon an empty stomach. One pair was treated with a course of half a pint sea water every day, and another was fed with the bigness of a nutmeg three times a day of an electuary made of garlic, mustard seed, radish root, Peruvian balsam and gum myrrh. Two others were ordered two spoonfuls of vinegar three times a

<sup>3</sup> Tuerk, M.D., *Der Aepfelwein. Seine Heilwirkung auf den menschlichen Körper*. Berlin 1855 and Bosch, Georg, *Klinische Studien über den Einfluß des Apfelweines auf Frequenz und Intensität der Pansenbewegungen bei den Wiederkäuern*. Berlin 1912.

<sup>4</sup> Müller, Irmgard, *Untersuchungen zur Arzneiversorgung an Bord vom Beginn der Entdeckungsreisen bis zur Einführung der Dampfschiffahrt*. PhD thesis, Düsseldorf 1969.

<sup>5</sup> Lind, James, *A Treatise of the Scurvy in Three Parts. Containing an inquiry into the nature, causes and cure of that disease, together with a critical and chronological view of what has been published on the subject*. A. Millar, London, 1753.

day upon an empty stomach, and the last two had each two oranges and one lemon every day.

Four out of the six groups reported no change, the men given cider reported a slight improvement, but the two seamen fed with citrus fruits experienced a remarkable recovery. Only after six days they were fit for duty. While there was nothing new about Lind's discovery - the benefits of lime juice had been known for centuries - he had proven the superiority of citrus fruits above all other 'remedies'. He undertook what may be the world's first controlled clinical nutrition study using human subjects.

The slight improvement of the two men given cider raises the question about the content of vitamin C in this beverage. In most modern books it is stated, that cider contains no vitamin C, or at the best a trace.<sup>6</sup> But how does this correspond to the recommendation based on empirical knowledge of the 18th century that apple cider might prevent scurvy? Well, we have to consider that cider was produced in a very different way than it is today.<sup>7</sup> Modern processing like fermentation, pasteurization, dilution and filtration leads to a nice drink, but rather poor of nutrients. In an experiment, ciderists produced a real cider the way it was done in England of the 18th century and found about 33 milligrams of ascorbic acid per litre, a quite considerable amount.<sup>8</sup>

### *Virtues of cider*

In Tübingen, Germany, Christian Friedrich Reuß (1745-1813) published in 1781 a book titled *Survey on Cider or Apfelwein, its nature, virtues and application*.<sup>9</sup> Reuß was born on July 7, 1745 in Copenhagen and obtained his medical doctor in 1769. He became medical professor in Tübingen in 1796 and received a Distinguished Service Medal, the Zivil-Verdienst-Orden in 1812, before he died October 17th, 1813.

In the chapter on the virtues of cider, Reuß presents a collection of Latin, Greek and German sources on the healthy effects of the drink. Based on the principles of humoral pathology, he recommended the beverage to warm the blood and cool the bile. Predominantly, he saw cider as a remedy to clean the intestine. However, he stated that heavy drinking of cider may cause - not

---

<sup>6</sup> Weill, Ernst, *Der Aepfelwein. Sein Werden und seine Geschichte unter besonderer Berücksichtigung des Frankfurter Aepfelweines*. PhD thesis, Frankfurt am Main 1928.

<sup>7</sup> Stopes, Henry: *Cider. The history, method of manufacture, and properties of this national beverage*. London 1888.

<sup>8</sup> Durham, Herbert E[dward]: "Notes on the medical history of cider: Past and present," *Cambridge University Medical Society Magazine*, (1929): 132-143.

<sup>9</sup> Reuß, Christian Friedrich, *Untersuchungen des Cyders oder Apfelweins nach seinen Eigenschaften und Wirkungen beym Gebrauch, nebst einer Anweisung seiner vortheilhaftesten Verfertigungs-Art*. Tübingen 1781.

surprising - colic and headache. But, he concluded, the benefits from regular drinking prevailed over these small uncomfortable feelings and a slight headache should be interpreted as evidence of good cider quality. Moreover, he promoted a moderate use of the drink.



Titlepage of the book of Christian Friedrich Reuß (1745-1813). See footnote 9.

### *Universal potency*

Johann Christian Wilhelm Petsch was born July 7, 1804 in Frankfurt am Main. He left Frankfurt in his youth and moved to Berlin in 1849, where he ran a wine and cider business. Later, he ran a second business in his home town Frankfurt. Petsch published several books about the virtues of cider and suggested its regular use: this also stimulated his sales.

The 12<sup>th</sup> edition of his book ‘Light and truth in practical medicine or the healthy virtues and blessing effects of unfalsified cider, united with pure milk and fresh water’ was printed in 1862.<sup>10</sup> Petsch promoted a drinking course to cure heart conditions, arthritis, asthma, insomnia, gout, cough, hay fever, and many more disorders. A table listed dosing recommendations for the mixture of cider, milk and water starting with 1 teaspoon 3 times a day for a newborn up to 3-month-old child. Adults should take 1 and a half tablespoons of each component three times daily, strong adults 1 and three quarters. Beside the internal use, he prescribed the application of cider externally, for example as a wound dressing or in cases of inflammation of the veins. In fact, Petsch believed his drink to be omnipotent and this is why he also recommended it for children. Altogether, the book listed 174 complaints to be treated successfully with the cider-milk-mix, including for example syphilis, loss of hair, epilepsy, and even rabies.



Portrait of Johann Christian Wilhelm Petsch (1804-1882).

Petsch promoted his cure at every possible occasion. In a letter, Petsch wrote to an editor from Königsberg he met during a train journey.<sup>11</sup> Petsch

<sup>10</sup> Petsch, Johann Christian Wilhelm, *Licht und Wahrheit im Gebiete der practischen Heilkunde, oder: Die heilsamen Wirkungen und segensreichen Folgen des unverfälschten Aepfelweins, mit reiner Milch und frischem Wasser vereint*. 12th ed., Berlin and Frankfurt 1862.

<sup>11</sup> Letter Gotha Oct 10th, 1862 to Dr. Minden Königsberg. Staatsbibliothek zu Berlin - Preußischer Kulturbesitz. Slg Darmst. 3d 1860(8) Petsch. The letter reads: “Ew. Wohlgeboren, werden sich noch einer freundlichen Unterhaltung über die erfolgreichen Wirkungen meines naturgemäßen Heilverfahrens durch die vereinten Heilkräfte Wasser Milch und Aepfelwein, erinnern, welche auf dero Reise von Frankfurt nach Königsberg im Dampfwagen stattgefunden hat. Ihr gütiges Anerbieten etwas für eine gute Sache und Förderung ihrer Gemeinnützigkeit beitragen zu wollen, giebt mir den Muth davon Gebrauch zu machen. Wie aus beigefügtem Prospekt zu ersehen ist, habe ich hier unter dem Schutze der

asked him to promote his course of cider drinking and signed the letter with his name and the professional addendum ‘Naturarzt’, natural physician, although he never studied medicine or held a medical degree. For this, he was convicted twice of quackery by a Berlin court, in 1856 and 1858.<sup>12</sup> During the first trial he boasted of curing more than 25000 patients with his cider. Because several witnesses testified to his success he was only convicted to pay a fine. As the letter written in 1862 proves, he continued to claim himself a medical practitioner.



Letter Petsch wrote Oct 10th, 1862 to Dr. Minden Königsberg. See footnote 11.

### *Cider whey*

Petsch found imitators for his medical approach.<sup>13</sup> One of them was Rudolph Weil, born on August 28th, 1841 in Berlin. There, he studied medicine and obtained a PhD in 1864 with a work on diphtheria. He succeeded Petsch but recommended boiling the mixture of cider, raw milk, and water, then filtrate the precipitated casein, and drink the cider whey.<sup>14</sup> Being a medical doctor, it seems that Weil better realised the limits of the remedy and so he promoted in his book

---

Staatsregierung festen Fuß gefaßt. Über die glücklichen Heilerfolge, welche ich erzielt u. noch erzielen werde, beziehe ich mich auf den Vorhergang öffentlicher Bletter. Mich dero schätzbarem Wohlwollen bestens mit aller Hochachtung u. Ergebenheit im Voraus Ew. Wohlgeboren dankbarer JCW Petsch Naturarzt.“

<sup>12</sup> N.N., “Aepfelwein-Händler Petsch vor dem Berliner Criminal-Senate,” *Didaskalia* (1858): 110; N.N.: “Der Aepfelweinhändler Petsch vor Gericht,” *Didaskalia* (1856):13 and Strauß, Julius Jacob, “Frankfurter ‘Ebbelwei’ in Berlin. Zur fünfzigsten Wiederkehr des Sterbegedenktages des J.C.W. Petsch,” *Die Siedlung* 5(1933): 5-6.

<sup>13</sup> *Apotheker-Zeitung* 1, 35 (1886): 189.

<sup>14</sup> Weil, Rud[olph], “Der Apfelwein und die Kur mit Apfelwein und Milch nach vierzigjähriger Erfahrung und Anwendung,” 2nd ed., Berlin 1906.

the mixture still for an extensive, but slightly more rational catalogue of illnesses related to the blood cycle, nervous and skeletal system.

### *Dosage finding*

Edouard Pierre Léonor Denis-Dumont stands pre-eminent in making a real attempt to analyse the value of cider in relation to certain diseased conditions. He was born in 1830 and died in 1886. In 1867 he was appointed Assistant Surgeon and Professor of Medicine to the *École de Médecine de Caen*, and in 1872 Full Surgeon und Professor. The 3<sup>rd</sup> edition of his book on the qualities of cider in medicine and hygiene, and its fabrication was published in 1883.<sup>15</sup> Dumont undertook case studies in patients with gallbladder stones, vomiting of pregnancy, renal colic and gravel, gout, and other illnesses. From his findings he assumed malic acid to be the active agent and experimented also with different amounts of cider to find the best dosage.<sup>16</sup>

### *Conclusion*

The literature about the medicinal use of cider is abundant. The few selected examples show that cider, also mixed with water and milk, was recommended against numerous complaints, and even promoted as a medicine of universal potency in humans. It was suggested to be particularly useful when taken regularly. Beside the internal use, cider was also applied externally.

The diuretic action of cider made it a highly reputed drug in a time when therapy was mainly based on the principles of humoral pathology. The considerable amount of ascorbic acid contained in the beverage in former times might explain its medicinal use from a more rational point of view. Today, hot apple cider is only used as a home remedy against common cold. Although cider has no evidence as a strong medicament in modern medicine, it is still a tasteful popular beverage.

## **Medicinal use of apple cider: A historical compendium**

The internal and external use of apple cider has a long tradition in folk medicine for the treatment and prophylaxis of several human and veterinary disorders. In Europe, we find multiple historical examples for its medical application. Cider was part of the early therapy of scurvy before lemons became the first line naval prophylaxis and treatment due to better stability. In Germany, Johann Christian Wilhelm Petsch (1804-1882) and Rudolph Weil (1841-?) recommended apple cider, pure and mixed with water and milk, as a medicine

---

<sup>15</sup> Denis-Dumont, Edouard Pierre Léonor, *Les Propriétés Médicales et Hygiéniques du Cidre et sa Fabrication*. 3e éd., 1883.

<sup>16</sup> Stopes, Henry, *Cider. The history, method of manufacture, and properties of this national beverage*. London 1888.

of universal potency in humans. They treated all kind of illnesses related to the blood cycle, nerve system and skeletal system. Cider was suggested to be particularly useful when applied regularly. It was recommended to cure heart conditions, arthritis, asthma, insomnia, gout, cough, hay fever, and many other complaints. Beside the internal use, cider was applied externally. The diuretic action of cider made it a highly reputed drug in a time, when therapy was mainly based on the principles of humoral pathology. The considerable amount of ascorbic acid contained in the beverage might explain its medicinal use from a more rational point of view. Today, apple cider is less commonly used for medicinal purposes, although it is widely known as a beverage.

**Keywords:** Cider, Christian Friedrich Reuř, Johann Christian Wilhelm Petsch, Drinking course, Apple.

### **Elma řarabının (Elma řırası) tıbbi kullanımı: Tarihsel bir derleme**

Elma řarabının folklorik tıpta, insan ve hayvan hastalıklarının tedavisinde ve profilaksisinde harici ve dahili olarak kullanılmasının uzun bir gemiři vardır. Avrupa'da, tıbbi uygulamasının ok eřitli tarihsel rnekleri grlr. Elma řarasının, denizcilikte iskorbtten korunmak iin limon kullanımından nce, tedavide nemli bir yeri vardı. Almanya'da Johann Christian Wilhelm Petsch (1804-1882) ve Rudolph Weil (1841-?) elma řarabını, saf veya su veya st ile karıřım halinde, insanlara cinsel gc arttırıcı bir ila olarak tavsiye etmiřlerdi. Kan dolařımı, sinir sistemi, kemikler ile ilgili her tr hastalıęı elma řarası ile tedavi etmiřlerdi. zellikle dzenli olarak kullanıldıęında etkili olduęu ileri srlmekteydi. Eklem iltihabı, astım, uykusuzluk, gut, ksrk, saman nezlesi ve bařka birok řikyeti tedavi iin tavsiye edilmekteydi. Diretik etkisi sebebiyle, zellikle tedavinin drt hılt teorisine dayalı olduęu dnemde, ok aranılan bir ilatı. İerdięi ok miktardaki askorbik asit, onun tıbbi kullanımındaki akılcı tutumu aıklayabilir. Bugn elma řarabı, meřrubat olarak tanınsa da, tedavi amalı kullanımı yaygın deęildir.

**Anahtar szckler:** Elma řarası, Elma řarabı, Christian Friedrich Reuř, Johann Christian Wilhelm Petsch, Meřrubat, Elma.