George Bartisch is best known as the German ophthalmologist who wrote the mammoth textbook *Ophthalmodouleia*, printed in 1583. He wrote several other books, most of which were never published. One that he self-published is on Venice Theriac of Andromachus. Common theriac has a long history in medicine from just after Hippocrates. It initially was used for venomous snake bites but later was used for poisonings too. By Bartisch’s time it was considered a nearly universal cure-all. In the book, a multitude of ophthalmic and general diseases are listed and then the dose of Theriac is given. Bartisch warned against the many inferior types of theriac available through unscrupulous traveling salespeople. He offered the superior Venice Theriac for sale, compounded by himself in Dresden, Germany, where he resided.

**GEORGE BARTISCH**

George Bartisch, the famous German ophthalmologist, published a booklet in 1602 on the Venice Theriac of Andromachus,¹,² which was a then well-known cure-all. His reputation now rests on his book *Ophthalmodouleia*, printed in 1583,³ which was the first comprehensive ophthalmology text in a modern language. It was written in a dialect of Early New High German and was directed toward the layman and surgeons. This is in distinction to the then standard works in Greek, Arabic, or Latin, which could only be read by physicians who had medical training. This training, however, did not generally include ophthalmic surgery. The surgical sections were then meant to improve the level of care provided by ophthalmologists to people with eye afflictions. Detailed prescriptions were included to allow the layman to prepare the mostly herbal remedies for those occasions when a trained person was not available.

Although the treatments he recommended are long out of favor, the essays he wrote that begin each disease section are commonly quoted in the historical introduction to modern papers. The color illustrations, especially of Bartisch preparing to couch a cataract or a strabismus patient with a full head mask to straighten his eyes, often will be shown at the beginning of a talk on new ophthalmic surgical procedures.

Bartisch was born in Königsbrück, Germany, in 1535.⁴ Because of poor finances he was unable to attend medical school and instead apprenticed himself to learn ophthalmology and bladder stone surgery. He was proud and pleased with his chosen profession and frequently felt called upon in his writings to clarify the difference between trained ophthalmic surgeons and other untrained practitioners. Treacle salesmen were especially singled out for his contempt.

Treacle as a loose synonym for theriac has an etymological history beginning with the Greek therion (a wild beast) and the Greek theriake (antidote for a beast attack, especially snake bites). In Latin this became theriaca (the medicine often made with viper meat) with the Vulgar Latin tria-cula and the diminutive theriacula. In Middle English it was triacle, and finally in English it became treacle. Today, treacle also refers to molasses, and in Bartisch’s...
Ophthalmodesis, especially after the publication of salesmen who were offering the keepers, rat catchers, and treacle henchmen, old hags, ruined shop-skirts of the market with the "former was assigned a position on the out-
during a fair. Early in his career he follow a certain route to be in town
many, as his home base. He would
remained a problem. Bartzsch was a prolific writer, yet getting financial backing for his books remained a problem. Ophthalmodouleia sold very well and earned him vast respect, but it was self-published in the first edition. Although few of them survive, he is said to have written at least 16 other books on topics such as hernias, anatomy, and dreams. At least 2 of the books were in verse. Kunstbuch, which is about urinary tract stones, was unpublished in his lifetime due to the lack of a publisher. The Theriac book, also self-published, was probably issued in a very limited edition and is extremely scarce now, with only one original copy available in a US library.
Bartzsch died in 1606, but many of the skills and medicines he described in his books lived on and were still believed to be valid hun-
dreds of years after his death. To-
day, he remains as one of the major figures in ophthalmology.

HISTORY OF THERIAC

As a popular medicine, theriac has an approximately 2000-year history, beginning as a cure for ven-
ous bites. Nicander, in the second century BC, wrote a long poem about theriac addressed to the King of Pergamum, who was notable for testing remedies on pris-
oners and servants.
In the first century AD, Andromachus took many of the ingre-
dients of mithridatium (a popular antixidant for poison) and the earlier theriaca compounds and importantly included vipers. He called his medicine "Tranquility." It was believed to be effective against snake and other venomous bites and stings of in-
sects. It was a general antidote against poisons and pollution, and it was used for all manner of general ailments as a curative and preventive. Andromachus wrote his formula in a poem dedicated to Nero, who seem-
ingly was most interested in its properties as an antidote against poisons.
In the next century, Galen (131-201 AD) wrote about various theriac compounds, but his favorite was the Theriac of Andromachus. This preparation was compounded by Ga-
len for the Emperor, Marcus Aurelius, who took a daily dose of it to protect against poisons and to aid in ensuring good general health. After Galen, medicine entered a time of minimal advancement, and with his blessing the Theriac of Andromachus maintained a privileged status as the preferred theriac. The basic for-
formula as it existed through the centu-
ries was fairly stable, consisting of vipers, opium, wine, honey, cinnamon, and about 60 herbs.

In the 12th century, Venice had become known as having a premier quality of Andromachus' Theriac. A religious and medical festival was held there each year for the prepa-
ration of the authentic Theriac. The compound, once prepared, was a rather soupy mix, and it was stored in a cool, dry place to mature. Seven years was a common time to wait un-
til using Theriac.
In Bartisch's time, Nurem-
burg, Germany, routinely had a simi-
lar 2-month festival in honor of The-
riac conducted by the government. Queen Elizabeth I was a regular taker of Theriac, primarily as a prophylaxis against poisoning. Also, in the 1600s, the King of France had his apothecaries breed vipers so that Theriac could be made locally.
In the early 1700s, the Pha-
macopoiea Officinalis of England
called the Theriac of Andromachus a "grand medicine"; however, this honored place for Theriac and the whole class of drugs referred to as theriac all came to a halt after the publication of Antitheriaka by W. Heberden in 1745. His attack on theriac as an unfounded polypharmacy of conflicting ingredients was very effective, and by the close of that century Theriac was taken off most formularies, although it survived here and there in India and a few European cities.

BARTISCH ON THERIAC

Bartisch’s 44-page booklet about Theriac is a simple document. His picture is the only illustration. This frontispiece shows an elderly man handsomely gotten up.

Bartisch does not set a price for his Theriac but says that the price of treatment depended on the prosperity of the patient. A full can of a bogus product obtainable from treacle salesmen at the market was 3 or 4 pfennigs. In his tract on theriac in 1596, J. Graman, a German physician, offered a quality theriac at a much higher cost, with about 4 doses of his theriac selling for 1 German thaler. It is difficult to be precise about local economies, but a cow could be purchased at about this same time in Germany for 5 thaler.

The main part of the book is a listing of ophthalmic and general diseases followed by the dose and mode of administration of Theriac, which was generally given with wine but could be taken dry. A patient might, in addition, be bled or take the baths or a sweating treatment, but taking Theriac was central in the way to a cure. He does not give the formula for Theriac. The multitude of difficult-to-obtain ingredients made it impossible for a layman to compound this medicine, unlike most of the simpler prescriptions in Ophthalmodouleia. The way for someone in Dresden to be sure of getting the bona fide product was to get it from Bartisch. On the other hand, he gives away treacle salesmen’s secrets by listing the formulas for some of the bogus preparations.

In Ophthalmodouleia, he identified himself only as a surgeon who performed eye surgery and operated on urinary tract stones. In the Theriac book he described himself in what may be a grammatical laxity as a physician as well. This would, however, explain the expansion of his practice of ophthalmology to include the whole host of medical diseases he lists.

Bartisch believed that people were sinful children of Adam and Eve deserving punishment in the form of being subject to horrible diseases, including blindness. God was merciful, however, and allowed Theriac to be available to physicians to aid the tribulations of humankind. “People particularly should use this noble Theriac . . . , who with age are polluted with much phlegmatic, cold, spoiled and melancholic, old, misplaced, fouled humors.”

In Bartisch’s Theriac text, more than 70 major categories of treat-
able diseases are listed. Venomous bites and poisons of all kinds did particularly well with Theriac treatment. General ailments also were to be treated, such as problems of aging, headaches, strokes, epilepsy, memory difficulties, and various organ failure diseases.

In the ophthalmology sections he describes the same melancholic, cold, foul humors as also causing vision problems, particularly with age. Dizziness was commonly associated with a visual sensation of spinning. This was treated with Theriac in creeping thyme and wild marjoram water. Dark, cloudy, weak, and dim vision problems were all linked together as age related and were treated with a pea-sized dose of dry Theriac eaten each evening. Blindness could come from a rising up of evil vapors from the stomach. A polluted head and deafness also went along with this problem and were also treated with a daily dose of dry Theriac.

In Ophthalmodouleia, he does not specifically use Venice Theriac of Andromachus, but he does list several other thierics of the finest quality as useful for the ophthalmic disease conditions just mentioned. In both books he is revealed as a caring doctor who wishes that quality medical care were more standard. Although he did not have a classical education, his medical knowledge was broad, and like others in his day, his physiology was based on Galen's traditional explanations. Bartisch firmly believed in the usefulness of his treatments and was humble in his status as a mere vehicle through which God might bring relief to the sufferings of mankind.

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REFERENCES

1. Bartisch G. Warhafftige, eigentliche und ausfu¨hrli-
che Beschreibung...des grossen Theriacks. 1602.