The Bloodletters of Florida

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In Florida, as elsewhere, there are modern usages of technically sophisticated therapeutic bloodletting with an occasional throwback to more primitive times.

The most interesting period of phlebotomy in Florida may well have been the earliest colonial days. In that era, the bleeding customs of Caribbean Indian tribes were practiced side-by-side with the skills of European ship surgeons. The contrasting features of those medical traditions are uniquely illustrated by the experience of one Lionel Wafer.

In 1681, Lionel Wafer, a young English physician, was marooned on the Isthmus of Darien. He had learned his profession while very young "in the service of the surgeon of the ship," probably on pirate vessels. He had also several years of practice in Jamaica, "at Port Royal where I followed my business of Surgery."

On his third voyage, he was left behind with "the wild Indians" to recuperate. His book on that experience contains many medical observations on the New World. Among the most descriptive passages are those telling of his life with a Panamanian Indian tribe whose chief, Lacenta, was "Prince over all the South."

"It so happen'd, that one of Lacenta's Wives being indisposed, was to be let Blood; which the Indians perform in this manner: The Patient is seated on a Stone in the River, and one with a small Bow shoots little Arrows into the naked Body of the Patient, up and down; shooting them as fast as he can, and not missing any part. But the Arrows are gaged, so that they penetrate no farther than we generally thrust our Lancets: And if by..."
chance they hit a Vein which is full of Wind, and the Blood spurts out a little, they will leap and skip about, shewing many Antick Gestures, by way of rejoycing and triumph.”

Wafer offered to perform the "Business of Surgery" in a better way and with his lancet "breathed" Lacenta’s wife’s vein. There was the sudden appearance of a stream of blood, and “Lacenta swore by his Tooth, that if she did otherwise than well, he would have my Heart’s Blood.”

Only 12 ounces were taken and the patient was well the next day. Wafer was made much of by Lacenta in a speech and after that he was carried from tribe to tribe in a hammock “in great Splendor and Repute, administering both Physick and Phlebotomy to those that wanted.”

It is not likely that Wafer had read of the circulation as described by Harvey 50 years earlier. But of course, bleeding had been the job of the barber surgeons from earliest times. Henry VIII had granted a charter in 1541 to his chief surgeon, Thomas Vicary, the elected Master of the United Company of Barbers and of Surgeons.

Warfer specifically could cut or “breathe” a vein, whereas the American Indian just cut indiscriminately, albeit to a regular “gaged” depth. To what extent was Lacenta’s method of bloodletting practiced by the Indians of Florida? The Calusas of South Florida were skilled seafarers and it is possible that they had come from the island of the Caribbean to make a new home in Florida long before the coming of the white man. They would have brought their knowledge of medicine with them.

Already in 1564, a century before Wafer, French Huguenots had planted the first European Colony this side of Mexico near the mouth of the Saint Johns River in Northeast Florida. In the engravings of Le Moyne, he illustrated bloodletting for pain by the Timucuan Indians who cut the skin with a sharp shell and then sucked out blood. Rather than waste it, that blood was given to drink to women who were nursing or pregnant. Much later, Bartram describes the use by Florida’s 18th century Indians of the sharp teeth of the garfish to scratch and bleed themselves.

Those references tell us that the practice of bleeding by the Indians of Northern Florida was much more primitive than that of the Indians of Panama. There was an official position of sangrador barbero (phlebotomist barber) on the rolls of the St. Augustine garrison in 1749.
The Armamentarium

Many of the instruments used for venesection by European surgeons of Wafer’s day, and earlier, became the tools of Florida’s colonial physicians. In an important sense the available tools molded the history of practice. For an appreciation of the depth of such practice, one documenting a 600 year history of surgical instruments bleeding instruments and describes them in 45 pages of text.6

The instruments are classified as being of five types: the Lancet, the Fleam and the Schnapper were for opening an artery or vein; the Scarificator and the Cup were for collecting capillary blood. There were also special instruments for applying the leech.

The Lancet—the true lancet was described over five hundred years ago. It had a flexible, pointed blade, usually double-edged and with folding guards of tortoise shell. Closed it was only ½ to 2 inches long. It was of course such a universal instrument in the medical practice that its name was given in 1823 to the most prestigious medical journal of the day.

The Fleam—the fleam usually had three triangular blades which folded into a brass or bone case.

The Schnapper—The spring lancet invented in 1680,7 had a single blade which was springloaded. It was made of steel or brass and was packaged in a small, fitted leather case. It became popular because its use required little knowledge of anatomy, and less bravery than the fleam.

The Scarificator—Ambrose Pare is credited with introducing the name in the 16th century8 for the brass box containing a strong spring which drove a set of razor-sharp blades. The cutting depth was adjustable.

The Cup—Dry cupping was done by placing a dome-shaped glass on the skin. The cup was heated to produce a vacuum although some models connected to a stopcock and syringe. In wet cupping, the glass was applied after

Fig. 3 - The Physician’s tools: Fleam, Scarificators and Cups. (Property of Dr. G. C. Austin, Miami. Photograph by Charles Bailey, U. Miami Department of Medical Photography).
the scarificator or the lancet had made multiple superficial cuts in the skin. The Leech—Feeding the leech to engorgement has been a method used from antiquity to the present day. One of the theses submitted for the degree of Doctor of Medicine from the University of Basel as late as 1949 was entitled: "On the leech and its use in medicine." The leech jar was once a classic piece of pharmacist’s pottery. The animal had to be handled carefully and among the instruments described was a speculum for placing the leech in the vagina.6

The Nineteenth Century

Among American physicians who brought the tradition of bloodletting to this country from their European training was Benjamin Rush, the "Prince of Bleeders". That signer of the Declaration of Independence, Physician-General of the Military Hospitals of the United States, first American psychiatrist and founder of Dickinson College, believed with a passion in the value of bloodletting, especially in the treatment of yellow fever and mental illness. In a career as medical educator he taught more than 3,000 students, and he taught them all how to bleed, and bleed, and bleed again. "If the state of the pulse be our guide, the continuation of its inflammatory action after the loss of even 100 ounces of blood, indicates the necessity of more bleeding." One of Rush's patients lost 470 ounces (14 liters) in forty-seven bleedings.10

As a teacher, Rush had a great influence on medicine in the South. Of the 116 physicians who had become members of the Medical Society of South Carolina up to 1813, the year of his death, 60 were pupils of Rush. One of them, William Montgomery, writing to Rush described his treatment of a member of the South Carolina legislature in 1797 by saying that he, "took from him 165 ounces in five days without affecting his pulse or diminishing his fever. He died. Had we taken a still greater quantity the event might perhaps have been more fortunate."11

More of Florida's early physicians were trained in the medical schools of South Carolina than in any other.12 There is no doubt that copious bleeding was primary therapy in Florida for yellow fever, as well as everything else. Dr. Ayers P. Merrill was stationed in 1822 at Fort Barrancas near Pensacola. He reported to the Surgeon General of his success several years earlier with yellow fever by bleeding thirty-six ounces at one time (followed by calomel, jalop, opium and mercury). As a prophylaxis, after
the arrival of a detachment in a yellow fever area he bled each man of sixteen ounces.\textsuperscript{13}

The reports of surgeons stationed at Fort Brooke (Tampa) before the Civil War show a similar reliance on bleeding and cupping for many ailments including the sudden transition of troops from "the cold climate of Maine to the almost tropical one of Tampa Bay."\textsuperscript{5}

Elsewhere in the South before the War between the States, another strong advocate of bloodletting was Dr. Moritz Schuppert, a graduate of the University of Marburg, who came to New Orleans in the early 1850's. He described its use during his training:\textsuperscript{14}

\begin{quote}
"I occasionally attended in one or the other village a dozen of young, full-blooded country girls, who assembled at the house of one or another, and while the feet were immersed in a bucket of warm water, I opened the saphena veins, abstracting from twelve to sixteen ounces of blood from each one. This was done every year in girls from the time when sixteen years old, till they were married, and never did I hear of any bad consequences."
\end{quote}

In 1861 in a pamphlet on gunshot wounds written for the surgeons of the Confederate States Army\textsuperscript{15} Schuppert advised:

\begin{quote}
The best results follow venesection in the treatment of complicated gun-shot wounds. But, alas! the value of bloodletting, is like so many other valuable remedies, now discredited, and expectant homoeopathy seems to rule the day, so that young physicians are afraid to practice venesection."
\end{quote}

Halstead in 1884 in his famous paper on exchange transfusion for illuminating gas poisoning, first bled the patient and then retransfused the defibrinated blood. (The term he used, "refusion", certainly is much more direct than today's, "autologuous transfusion.") But his report really is a description of the excellent effects of simple bloodletting on carbon monoxide poisoning. \textsuperscript{16} He says: "Why then transfuse, if venesection accomplished so much? If for no other reason, to allow of repeated venesection."

However, by the end of the 19th century, there were few standard textbooks of medicine which advocated bloodletting.\textsuperscript{17} It was well recognized that the bleeding and purging therapy had taken its toll, and in Florida as well. In an address on the medical history of Florida in 1877 Palmer decries the earlier use of the lancet "which exhausted the strength of the patient."\textsuperscript{18}

\begin{center}
\textbf{Modern Usages}
\end{center}

A bona fide case of wet cupping came to light in Florida in 1979 when a patient with an unusual history was seen by one of us (J.C.):

A Florida engineer, working for a maritime company in Nigeria, was wearing heavy boots and working on a piece of machinery in a room where the temperature was in excess of 120F. Seeking relief from the heat, he went swimming and on emerging from the water developed swelling and pain in both legs. The German-speaking company doctor he went to see provided some treatment, but little rapport or relief. As a consequence he went to the local native doctor. That doctor sucked the air out of a hole in the small end of a hollow animal horn. He applied the horn to the skin and closed off the hole with a piece of rawhide he had been chewing. After the patient's skin had been raised by the vacuum thus produced, the doctor removed the horn and made multiple superficial cuts in the skin over that area. The animal horn was then reapplied in the same manner to the now lacerated area causing the extraction of blood and serous fluid. The treatment was applied to several areas.
The patient reported relief from his pain and the swelling receded in his left leg. However, the swelling in his right leg persisted, and the company shipped him home for care. He was admitted to a Florida hospital with a cellulitis, but also with nothing but praise for his native doctor. He was treated successfully with antibiotics and returned to Africa.

Photographs of the lacerating implement which he brought with him, and a Nigerian animal horn used for such cupping are shown. The modern "lancet" appears to have been constructed from an automobile radio antenna and a piece of tin can.

Therapeutic phlebotomy is still practiced in folk medicine and is also a mainstay in managing polycythemias. It has been revived recently in medical centers in a special form as exchange plasmapheresis where, like the old art of bloodletting it "eliminates rheumatic ailments, warms the marrow, clears the mind and makes the urine clean and clear."19

But do our modern reasons for bloodletting do ill or good? Perhaps like our predecessors in the art of medicine, and their patients, we should respect the healing value of the loss of blood. An old English adage 17 may be true:

"A bleeding in the spring
Is Physic for a king."

References


12 Personal Communication: Dr. Ashby Hammond, August 1979.


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