



## Medical Errors

A two CEU Hour study of root-cause analysis, error reduction and prevention, and patient safety related to the practice of acupuncture, specifically infections from needles, FDA requirements, and the Hepatitis B epidemic in China caused from reusing nonsterile needles – copyright 2006 by Harvey Kaltsas, AP, DOM, the Healing Centre, LLC

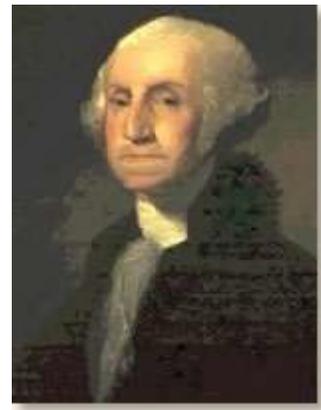
Take the Test

We take for granted that the medical practices of this century are safe, that we have learned from our past mistakes, and that we would never countenance posing significant risks to patients' health from the work we do as doctors. However, medical practices worldwide function with particular cultural contexts that sometimes have within them unquestioned assumptions about health, some of which can be both wrong and unhealthy.

The traditional Chinese medicine we now practice emerged from a region which to this day continues unsafe medical practices that pose ongoing threats to patients. We will examine some of these risks and practices later on, but first we must understand gain a little perspective and humility about our own Western culture and medicine.

We look back at some of the dangerous practices of past centuries with amazement and amusement. How could doctors of the 1700s have possibly practiced bloodletting (in pints, not drops) as a way to get people well? The following story about our first President, George Washington, is instructive as to how misguided some of America's medical practices were just 200 years ago.

**"G**eorge Washington finished his second term as the first President of the United States in 1797. Weary of the political infighting surrounding the presidency, he longed for the peace of retirement to his beloved Mount Vernon. Unfortunately, his solitude lasted less than three years as he died on December 14, 1799 at age 67.



### Death of a Founding Father

*George Washington Custis was the son of John Custis, the son of Martha Washington from her first marriage to Daniel Custis. George Washington Custis was thus Martha Washington's grandson. His father - John - served as an aide to George Washington and **died from camp fever** during the Battle of Yorktown in 1781. Washington immediately adopted the six-month-old Custis and his sister Eleanor as his own children. Custis lived at Mount Vernon and became the darling of the household.*

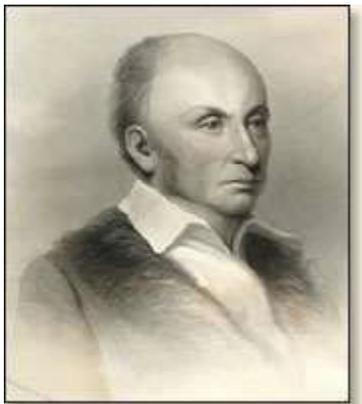
*Custis was nineteen at the time of Washington's death. He describes the scene:*

*"On the morning of the thirteenth, the general was engaged in making some improvements in the front of Mount Vernon. As was usual with him, he carried his own compass, noted his observations, and marked out the ground. The day became **rainy, with sleet**, and the*

improver remained so long exposed to the inclemency of the weather as to be considerably wetted before his return to the house. About one o'clock he was **seized with chilliness and nausea**, but having changed his clothes, he sat down to his indoor work - there being no moment of his time for which he had not provided an appropriate employment.

At night on joining his family circle, the general complained of a slight indisposition, and after a single cup of tea, repaired to his library, where he remained writing until between eleven and twelve o'clock. Mrs. Washington retired about the usual family hour, but becoming alarmed at not hearing the accustomed sound of the library door as it closed for the night, and gave signal for rest in the well-regulated mansion, she rose again, and continued sitting up, in much anxiety and suspense. At length the well-known step was heard on the stair, and upon the general's entering his chamber, the lady chided him for staying up so late, knowing him to be unwell, to which Washington made this memorably reply: 'I came so soon as my business was accomplished. You well know that through a long life, it has been my unvaried rule, never to put off till the morrow the duties which should be performed today.'"

Having first covered the fire with care, the man of mighty labors sought repose; but it came not, as it long had been wont to do, to comfort and restore after the many and earnest occupations of the well-spent day. The night was passed in feverish restlessness and pain...The manly sufferer uttered no complaint, would permit no one to be disturbed in their



George Washington Custis

rest on his account, and it was only at daybreak he would consent that the overseer might be called in, and **bleeding resorted to. A vein was opened, but no relief afforded.** Couriers were dispatched to Dr. Craik, the family, and Drs. Dick and Brown, the consulting physicians, all of whom came with speed. The **proper remedies were administered, but without producing their healing effects**; while the patient, yielding to the anxious looks of all around him, waived his usual objections to medicines, and took those which were prescribed without hesitation or remark. The medical gentlemen spared not their skill, and all the resources of their art were exhausted in unwearied endeavors to preserve this noblest work of nature.

The night approached - the last night of Washington. The weather became severely cold while the group gathered nearer to the couch of the sufferer, watching with intense anxiety for the slightest dawning of hope. He spoke but little. To the respectful and affectionate inquiries of an old family servant, as she smoothed down his pillow, how he felt himself, he answered, 'I am very ill.' To Dr. Craik, his earliest companion-in-arms, longest tried and bosom friend, he observed, 'I am dying, sir - but am not afraid to die.' To Mrs. Washington he said, 'Go to my desk, and in the private drawer you will find two papers - bring them to me.' They were brought. He continued - 'These are my Wills - preserve this one and burn the other,' which was accordingly done. Calling to Colonel Lear, he directed - 'Let my corpse be kept for the usual period of three days.'

The patient bore his acute sufferings with fortitude and perfect resignation to the Divine will, while as the night advanced it became evident that he was sinking, and he seemed fully aware

that 'his hour was nigh.' He inquired the time, and was answered a few minutes to ten. He spoke no more - the hand of death was upon him, and he was conscious that 'his hour was come.' With surprising self-possession he prepared to die. Composing his form at length, and folding his arms on his bosom, without a sigh, without a groan, the Father of his Country died. No pang or struggle told when the noble spirit took its noiseless flight; while so tranquil appeared the manly features in the repose of death, that some moments had passed ere those around could believe that the patriarch was no more."

### **Modern medical opinion speculates that Washington died of acute laryngitis.**

If George Washington had access to a practitioner using the traditional Chinese medicine of that era he would probably have been diagnosed with a wind heat invasion. Instead of being bled by the pint and thus weakened, our first President would probably have been given Gan Mao Ling Wan or Chuan Xin Lian, and lived a much longer life, maybe even getting on the hundred rather than the one dollar bill.

The 19th century wasn't much better. According to Wikipedia\*, "Ignaz Philipp Semmelweis (July 1, 1818 - August 13, 1865) was the Hungarian physician who demonstrated that puerperal fever (also known as "childbed fever") was contagious and that its incidence could be drastically reduced by enforcing appropriate hand-washing behavior by medical care-givers. He made this discovery in 1847 while working in the Maternity Department of the Vienna Lying-in Hospital. His failure to convince his fellow doctors led to a tragic conclusion, however, he was ultimately vindicated.

Semmelweis realized that the number of cases of puerperal fever was much larger at one of his wards than at the other. After testing a few hypotheses, he found that the number of cases was drastically reduced if the doctors washed their hands carefully before dealing with a pregnant woman. Risk was especially high if they had been in contact with corpses before they treated the women. The germ theory of disease had not yet been developed at the time. Thus, Semmelweis concluded that some unknown "cadaveric material" caused childbed fever.

He lectured publicly about his results in 1850, however, the reception by the medical community was cold, if not hostile. His observations went against the current scientific opinion of the time, which blamed diseases on an imbalance of the basical "humours" in the body. It was also argued that even if his findings were correct, washing one's hands each time before treating a pregnant woman, as Semmelweis advised, would be too much work. Nor were doctors eager to admit that they had caused so many deaths. Semmelweis spent 14 years developing his ideas and lobbying for their acceptance, culminating in a book he wrote in 1861. The book received poor reviews, and he responded with polemic. In 1865, he suffered a nervous breakdown and was committed to an insane asylum where he soon died from blood poisoning.

Only after Dr. Semmelweis's death was the germ theory of disease developed, and he is now recognized as a pioneer of antiseptic policy and prevention of nosocomial disease."

By the 20<sup>th</sup> century we developed the field of ionizing radiation for medical imagery using X-Rays. Unfortunately, to this day, the medical community by and large does not

understand how sensitive our genes are to damage from such radiation and regularly overexpose patients. As a result, according to voluminous documentation compiled by Dr. John W. Gofman, M.D., Ph.D. (Physics), discoverer of both plutonium and high and low density lipids, medical radiation is an essential co-factor in 75% of all cases of heart disease and cancer in the USA.

For example, in the 1960s and 1970s, women were routinely exposed to 10 units of radiation (rads) per mammography exam. Dr. Gofman explains that once a person is exposed to 270 rads, they have 100% chance of developing cancer. Cancer risk is thus calculated as a function of rad exposure. A woman who received yearly mammograms from 1960 to 1979 would have received 200 units of radiation (rads). Thus, from mammographic ionizing radiation alone, her chance of developing cancer would be 200/270 or 74%!

By 1978 Walker had published a study revealing that the number of breast cancer detectable and curable from mammograms at 10 rads per yearly exam would be less than the number of cancers caused by the cumulative dosage of radiation received from these diagnostic procedures. In response to this study and other pressures, by 1983 the standard rad dose for mammograms was reduced to 1/10<sup>th</sup> of a rad per mammogram – without losing image quality, a 100 fold drop!

Since there is a 20 to 30 year latency period before breast cancers show up, after climbing steadily since 1980, rates of increase of breast cancer did not stabilize until 2001 and may have started to fall in 2003. Brenda Edwards of the National Cancer Institute said it could be because “the use of mammography appears to have peaked, the number of women delaying childbearing may have stabilized, and the use of hormones after menopause [another medical error] has plummeted.”

But this is all story for another, much more in depth Healing Centre CEU course, **Medical Imaging –Ionizing Radiation and Human Health – 10 Hours.**

The World Health Organization issued its World Health Report in 2002 called **Reducing Risks, Promoting Healthy Life.** This work describes the 26 leading risk factors in the world by region. Mortality, illness, and years of life lost are described. It’s hard to imagine, but unsafe health care injections rank 18<sup>th</sup>, accounting for more mortality than illnesses caused by illicit drug use, lead exposure, climate change, lack of contraception, occupational injuries, carcinogens from the workplace, and exposure to airborne particles in the workplace.

Of greater concern to us as acupuncturists is the fact the countries of South East Asia and the Western Pacific, from whence our medicine originated, lead the five other areas of the world in mortality from unsafe health care injections. In the year 2000, 501,000 people died worldwide from unsafe health care injections. In countries of South East Asia and the Western Pacific, 377,000 people died in 2000 from unsafe health care injections, 75.25% of the world total!

More specifically, it has been reported in the New York Times that 20% of all children under age 21 living in the People's Republic of China suffer Hepatitis B infections derived from unsterilized needles used in medical practice. Granted, the large majority of these children were infected by hypodermic needles, not from acupuncture, but the situation still reveals an underlying cultural assumption taken for granted in significant measure by those who brought traditional Chinese medicine to America.

In 1990 the Florida Board of Acupuncture, cognizant of this situation and aware that reusable acupuncture needles could not be properly sterilized for less than the 3 cents per needle cost of sterile, disposable needles, passed a rule requiring that only such sterile, disposable needles for one time use be employed in the practice of acupuncture.

The firestorm of protest which followed was most instructive. One practitioner even testified to the board wondering why there was such a fuss about sterility since "in China everyone knew that you had only to wipe the needles with your own saliva before sticking them into the patient."

Politics being what it is in Florida, this same practitioner was then appointed by the Governor to serve on the Board of Acupuncture, and the rule requiring sterile disposable needles for one time use only was rescinded.

Fortunately, the Florida Senate, for the first time in 17 years, overturned the Governor's ill-advised appointment, and in 2011 the Florida Board of Acupuncture revised its rules to require needles be sterile and for one time use only.

## **Part Two: Error reduction, prevention, and patient safety related to the practice of acupuncture**

From time immemorial acupuncturists have understood that certain points are inappropriate to needle and moxa or are inappropriate to needle at certain depths. Breaching these boundaries can have significantly adverse effects, as the following cautionary tale may illustrate. In the mid-1980's I was President of the Florida State Acupuncture Association, and together with AAAOM Florida acupuncturists were making a concerted effort to get acupuncture as a modality and acupuncturists as providers included under Medicare part B. President Reagan had appointed Dr. Robert Windom from Sarasota (my home town) as his under Secretary of Health. Unfortunately, Dr. Windom was ill disposed to any favorable discussions about acupuncture. Why not? Because his personal secretary in his own Sarasota medical office had gone for acupuncture treatment and suffered a pneumothorax at the hands of her licensed acupuncturist!

To avoid such calamities as pneumothorax, Dr. James Tin Yau So, founder of the New England School of Acupuncture, was emphatic about proper depths of needle penetration, points forbidden to needle, and points forbidden to moxa. These guidelines and prohibitions are discussed below, and all quotations refer to words spoken by Dr. So and recorded in notes I took of his classes in 1976 and 1977. There are no peer-reviewed studies to back up these recommendations. However they were born out of Dr. So's 37 years of clinical experience (at the time) and the experience of his teacher Tsang Tien Chi who in turn had learned of them studying under Ching Tan An. Further insight into Dr. So's perspectives may be gained from reading his two books:

- The Book of Acupuncture Points by James Tin Yau So (Hardcover - Sep 1985)
- Treatment of Disease by Acupuncture (Treatment of Disease with Acupuncture) by James Tin Yao So and Richard Feit (Hardcover - Sep 1987)

### **General Safety Guidelines**

Dr. So had some general guidelines about needle safety.

1. Foremost was NEVER to insert the needle to the hilt, where the handle wraps around the shaft. This is the weakest point and where the needle is most likely to break. If inserted to the hilt, it is very difficult upon breaking to grab the shaft, even with a forceps, to retract the needle.
2. To avoid pneumothorax, be very careful about depth of insertion when needling areas around the lungs, both on the front and the back. Dr. So would recommend depths of ¼" to ½" usually for the outer urinary bladder points and small intestine points on the thorax and similar depths for kidney, stomach, and conception vessel points on the chest above the lungs.

3. When pulling out the needle, do it slowly, and have dry cotton balls or q-tips handy to stem any blood that may flow out. "Don't use alcohol. This will hurt the patient."
4. When needling near a pulse, use your pressing finger to move the pulse out of the way and to ensure that the needle does not penetrate the pulse, e.g. UB 2.
5. "Never leave a prismatic needle in the body. It is just for bleeding."
6. "Before and after treating the patient, thoroughly clean hands and nails. Very important!"
7. "Clean the area around the point with alcohol before needling."
8. While treating patients with infectious diseases, i.e. hepatitis, syphilis, tuberculosis, be especially careful not to prick your fingers with their needles."
9. "If a patient feels tired or dizzy during the treatment, you should stop the treatment at once." Important always to be conscious of the patient's facial coloring and reactions. For fainting, watch eyes, color in face. If patient becomes dizzy, have them relax. Resume treatment after they rest. Causes? Hungry, tired, scared and low blood pressure.
10. "It is extremely dangerous to use acupuncture on someone who's using psychedelic drugs including marijuana."
11. "Don't treat someone on a fast" or "on the day of the patient's first sexual experience!"

**Forbidden to needle:**

GV 24 – "If the needle is used here it may cause madness or blindness." Also, do not use this point in the evening as "it will prevent the patient from sleeping the whole night."

GV 22 – forbidden to needle or moxa for children under 8 years old

GV16 – While treating head should be erect

CV 17 – No needle. "Numbness spreads through whole body." Disperses qi.

CV 15 – No needle. "(needle would shorten life by weakening the heart)"

CV 8 – No needle. "The old book says, if you apply a needle to the umbilicus an ulcer will form, and the feces will come out through the umbilicus and the patient will die."

CV 4 - "No needle for pregnant women." May provoke an abortion.

X Scrotum 1 Nang Di (bottom of scrotum) – No needle

ST 25 - "No needle for pregnant women."

GV 11 - No needle

XB-1 Pee Gun (root of tumor) – No needle

L.I. 4 - "No needle for pregnant women."

XFi 5 Wu fu (five tigers) – "Location: In the middle of the second knuckles of the four fingers and the thumb" – No needle

XL 2 Hok deng (top of the crane) - Location: "In the vertical cleft at the center of the patella. In the center of the cleft." – No needle

Lu 2 - "No needle. Needle would damage arms – making it difficult to raise them."

H 2 – No needle

TW 8 – "Needle: FORBIDDEN"

Ki 11 – "Big pulse. No needle."

LV 12 – No needle

ST 1 - No needle. "A needle here would turn the whole eye black."

GB 3 - No needle "Deep needle here would cause deafness."

GB 18 - No needle

UB 56 - No needle

### **Precautionary measures when needling:**

UB1 – "Put head against a restraint when needling this point"

XF-4 Yu Yao (fish loins) – Don't touch the bone. Needle superficially.

CV 23 – Needle at a 75 degree angle downwards. The wrong angle is dangerous. "Warn the patient not to talk or swallow during insertion and while the needle is in the skin."

CV 22 – "Insert with pressing finger touching the backside of the sternum; then tilt the needle at a 75 degree angle downwards. The wrong angle is dangerous. Go behind the sternum bone. Patient must not talk or swallow during treatment with needle inserted!"

St 30 – "A big pulse is close to this point. Be careful."

GB 21 – "Do not needle this point if a woman is pregnant! No deep needle on patients with a history of heart problems!"

ST 9 - "No deep needle. Will kill patient."

**Forbidden or caution with moxa:**

GV 23 – direct moxa “more than 5 times will cause dimness of the eyes.”

GV 22 – forbidden to moxa for children under 8 years old

GB 15 – Moxa used here “will cause headache and blindness.”

St 8 – may cause blindness

GV16 – No moxa, can cause loss of speech

GV 15 – Moxa here may cause muteness

UB 2 – No moxa

TW 23 – No moxa

UB1- No moxa – even “once causes blindness”

GB 25 - No moxa

L.I . 20 – No moxa

G.V. 26 – No moxa. DEATH! Dr. So knew of a monk who had moxa performed on this point. Too much blood and qi rushed to the monk’s head, and he died of a stroke.

ST 4 – generally avoid moxa on the face because of scars, but this point can be moxa’d 5 times in cases of difficult paralysis of the mouth

XF-4 Yu Yao (fish loins) – No moxa

XF-6 Jia Cheng Chiang (beside receiving starch) – No moxa

XF-7 Hai Chuen (sea spring) – “No moxa in the mouth”

XF-8 Jin Jin (left) (golden fluid) - “No moxa in the mouth”

Yu Yeh (right) (jade fluid) - “No moxa in the mouth”

CV 11 – “NO MOXA DURING PREGNANCY.” Can cause abortion or fetal deformation.

CV 4 – “No moxa on pregnant women.” May provoke an abortion.

XP 1 Gwei Tau (head of penis) – NO MOXA

XB-1 Pee Gun (root of tumor) – Only direct moxa, the size of a red bean, 14 times. If this point needs to be treated more than once, wait 14 days each time between treatments.”

Lung 5 – No moxa

Lung 8 – No moxa – “a small pulse at this point”

PC 9 – No moxa

SP 2 - "No moxa during pregnancy or for three months after confinement."  
XFi 4 Sih Shuiian (ten drain off) – "Location: on the ten fingers where the middle  
of the fingernail meets the finger" – No moxa

UB 54 (old terminology) new UB 40 – "No moxa; moxa here will shorten the  
nerve."

UB 62 – No moxa

GV 6 - No moxa

GV 28 - No moxa

Lu 3 - No moxa

Lu 10 - No moxa

LI 19 - No moxa

TW 16 – No moxa

SI 18 - No moxa

SP 7 0 No moxa

ST 1 – Although Dr. So recommends moxa 3 x to this point, he also cautions that  
the old book says: "moxa here will cause the eye to swell as big as a fist  
and will cause nasal polyps to expand the size of a peach. After 30 days  
the eye will be blind."

ST 2 – No moxa

St 7 - No moxa

St 9 – No moxa

ST 32 - No Moxa

GB 22 – No moxa – "Moxa here will cause a carbuncle to grow. If the carbuncle  
breaks on the inside, the patient will die."

GB 42 - No moxa

UB 6 - No moxa

UB 51 (old terminology) UB 37 – Yin men – No moxa