

Quote of the Month:

"Speculation is a legitimate way of inducing and accelerating developments in science provided it is accepted that such conjectures do not necessarily remain the exclusive intellectual property of their author if they are later validated and exploited by others in making new discoveries...Laennec's invention of the monaural stethoscope in 1819, happened through a flash of practical inspiration rather than proceeding from an earlier stage of detailed hypothesis. The particular brilliance of Laennec's achievement was in the clinical application of his methodology and in the correlation with underlying pathology."

Neil J McLellan, *The Lancet* 1998;352:312-3

1. Meeting began at 11:30 am and adjourned at 1:45 pm.
2. Members present: Blanke, Breed, Cherington, Kamin, Kithil, Olson, Smith, Toler, H Wachtel, Yarnell.
3. In the past at these meetings, we have discussed the topic, **post-traumatic stress disorder**, and lightning strike casualties. In recent months, there have been several articles and reviews on post-traumatic stress disorder (PTSD) in the literature. I have selected a few of these articles (along with a brief abstract of each) and listed them here:

a.) Peebles-Kleiger MJ, Zerbe KJ. Office management of posttraumatic stress disorder. *Postgraduate Med* 1998;103:181-196

"PTSD is the best-known psychiatric sequelae of trauma. It was established as a diagnosis in 1980 and consists of three clusters of symptoms: *reexperiencing, avoidance, and hyperarousal*. Reexperiencing may involve vivid recurring dreams or nightmares, unwanted and relentless thoughts about the event...Patients...may show classic "flashbacks." Avoidance symptoms involve feeling numb...poor concentration...and difficulty remembering...withdrawing from social activities... Hyperarousal symptoms include *sleep disturbance, hyperirritability, increased angry outbursts...various somatic complaints*... Treatment includes drug therapy and clinical office techniques to stabilize symptoms, such as interrupting traumatic flashbacks, educating family members about effective home care, and redirecting unhealthy self-blame and aggression."

b. Turnbull GJ. A review of post-traumatic stress disorder. Part I: Historical development and classification. *Injury* 1998;29:87-91

"Samuel Pepys described reactions indistinguishable from PTSD in survivors of the Great Fire of London of 1666...Charles Dickens clearly described the...features of PTSD in himself following his involvement in a train crash in Staplehurst in Kent in 1865...I am not quite right within...but believe it to be an effect of the railway shaking...The modern concept that the impact of a traumatic stressor will have clearly defined psychological, interrelational and biological consequences."

c. Editors. The trauma of serious illness. *HealthNews* June 25, 1998;1-2.

"Recognizing Post-traumatic Stress Disorder
Reliving the event through vivid memories or flashbacks

Feeling emotionally numb
 Feeling overwhelmed by everyday tasks or situations
 Having a shrinking interest in performing normal tasks
 Crying uncontrollably
 Staying away from family and friends; avoiding social situations
 Relying on alcohol or drugs to get through the day
 Feeling extremely irritable, angry, suspicious or frightened
 Having difficulty falling or staying asleep, or experiencing nightmares
 Feeling guilty about surviving the event
 Having a sense of doom about the future"

"The goal of therapy is helping someone with PTSD come to terms with the traumatic events. There are two main parts to this. One involves a process of desensitization...The other step involves learning to identify and master the physical response triggered by reminders of the trauma."

d. Rauch SL, Shin LM, Whalen PJ, Pitman RK. Neuroimaging and the neuroanatomy of posttraumatic stress disorder. *CNS Spectrums* 1998;3:31-41

"Morphometric MRI studies have reliably shown reduced hippocampal volume in subjects with PTSD vs control cohorts. Functional imaging studies have implicated a network of brain regions in PTSD, comprising the amygdala, hippocampus, and anterior paralimbic territories, as well as Broca's area and visual cortex."

4. We received a letter via fax from Nicolas Floret from France. Nicolas wrote in response to our discussion on lightning detectors as mentioned in the September minutes. Nicolas works for Dimensions, a company involved in lightning detection and location. He points out that there are many different types of lightning detectors (e.g. electrostatic field, intra-cloud lightning; cloud-to-ground lightning).

Rich Kithil indicated that up to date detectors consist of two data sets: 1) radar data that measures rain fall and might be useful in dealing with localized flooding; 2) atmospheric electricity data. Rich stated that there are times when the best lightning detector may be an observing, knowing, and thinking person.

The group discussed the matter of lightning protection and lightning rods. Rich pointed out that lightning rods protect buildings but often fail to protect people or the contents of the house. Dan Breed stated that there may be danger to a person who stands next to a lightning rod. No one was able to cite any scientific article that proves the effectiveness of lightning rods in protecting people. Gunnar Blanke stated that although lightning rods are situated in the lightning fields at New Mexico Tech in Socorro, NM, to date, a lightning rod there has never been struck.

As a result of this discussion, we thought we should ask those who read these minutes to contact us and give us their thoughts about the questions: Are lightning rods protective? Are some better than others? (Some active lightning rods are "always ionizing"). What precautions should people take when near lightning rods? We shall collect the responses and try to share some of them in future minutes.

5. Barry Kamin brought us up to date regarding our Web Page. The group decided that the following items be placed on the Page: 1) The profile and mission statement of LDC; 2) Lightning photographs provided by our photographers; 3) minutes of LDC; 3) panel of physicians who are available to patients who have lightning-related symptoms. Dr. Yarnell and Dr. Smith will be on the list; 4) links to other

non-commercial sites. The group did not believe we should add full publications to the web site. On the rare occasion that we might, we would need permission of the authors and the publisher. We preferred that we continue to list articles along with a brief summary or abstract.

6. Dan Breed told us about a lightning strike to his home near Boulder this past summer. The TV antenna on the roof may have been struck. There was damage to his television, VCR, and telephone. Dan was in Mexico at the time, but his daughter did receive a shock as she touched the television set. The lightning tripped the circuit breaker on the side of the house near the lightning. In the summer of 1997 a tree in his front yard was struck by lightning.
7. Gunnar Blanke informed us that the television series, "Eyes of the Storm," will be shown on The Learning Channel (TLC) on Monday evenings. The series will deal with victims of severe weather. Gunnar helped to produce this series.
8. Our group thanked Chery. Toler for doing the valuable work for LDC. Our mailings and telephone calls to the office continue to increase in numbers.
9. Rich Kithil gave the LDC office a copy of the NCAA booklet on Lightning Safety for 1998-99. Rich brought back several booklets on lightning protection (Protection Contra Foudre) given to him by Dr. Elisabeth Gourbiere when they attended a meeting in Birmingham. Elisabeth is a member of Association Protection Foudre in France. That group is about 5 years old.
10. Phil Yarnell relayed a conversation he had with a physician on our staff who is also an experienced mountain climber. That physician stated that he is not aware of any lightning protection considerations taken by climbers of Mt. Everest. Nor was he aware of any lightning injuries on Mt. Everest. We ask our readers to provide us any information they might have on this topic.
11. Two weeks ago, Howard Wachtel attended a meeting about the effects of EMF on cancer and other maladies. Howard reported that the committee concluded that EMF is a "possible carcinogen" with a "Class 2B risk." (Highest risk = Class 4). Howard stated that the conclusion is controversial because, in part, it was based on old data that had been challenged by scientists.
12. Sheryl Olson asked if people "in motion" (eg on a bicycle) are at more or less risk as compared with people standing still. Howard Wachtel speculated that the motion was not likely to be a factor. Since lightning occurs in a matter of microseconds, a bicyclist traveling at 15 mile/hour could be viewed as the same as a person standing still.

Sheryl reported about a lightning incident that occurred on September 23 in Lamar, Colorado. Four men on a farm were struck while working in steel pig shed. A 32 year old man carrying a metal object was killed. The other 3 men survived. Her patient was a 27 year old man who had fernlike burns on his shoulder, thorax, and left leg. He also suffered a ruptured tympanic membrane. The lightning struck at about 2:30 in the afternoon.
13. Phil Yarnell reported on a pilot who was injured in 1992 while flying at 6000 feet. Lightning current entered via the rudder pedal and he suffered burns on his right leg.

- 14. These minutes reflect the comments of the members and do not represent official positions of LDC.
- 15. Next meeting will be held in the Main Auditorium of St. Anthony Central Hospital at 11:30 am on Friday, the 13th of November.

Respectfully submitted,



Michael Cherington, MD
Chair, LDC Scientific Committee