

**LIGHTNING DATA CENTER
ST. ANTHONY HOSPITAL DENVER
MINUTES
JUNE 14, 2002**

Quote of the Month:

“I landed in London on a wintry autumn evening. It was dark and raining, and I saw more fog and mud in a minute than I had seen in a year.”

Charles Dickens, David Copperfield, 1870

1. Meeting began at 11:30 am and adjourned at 1:00 pm.
2. Members present: Arendt, Barron, Cherington, Keen, Langford, Madayag, Mains, McDonough, Michener, Mouchantat, Offner, Oleszek, Paton, Russon, Stewart, Yarnell.
3. I brought the following articles (abstracted in part here):

- a. Zimmermann C, Cooper MA, Holle RL. Lightning Safety Guidelines. Ann Emerg Med 2002;39:660-4.

“To standardize recommended actions during thunderstorms, the Lightning Safety Group (LSG), composed of lightning experts from many lightning-related backgrounds, met at the American Meteorological Society meeting Phoenix, AZ, in January 1998 to collectively address personal lightning safety. This paper is a summary of the recommendations developed by the LSG.”

- b. Carte AE, Anderson RB, Cooper MA. A large group of children struck by lightning. Ann Emerg Med 2002;39:665-70.

“A retrospective analysis was done of the camping scene and injuries to 28 people...from a documented lightning strike...Of the 35 victims sleeping in the tent, 4 girls and 4 dogs were fatally injured....injuries included burns (23), cataracts (8), macular holes (4), tympanic membrane rupture (2) and skull fracture (2).”

- c. Kalaita J, Jose M, Misra UK. Myelopathy and amnesia following accidental electrical injury. Spinal Cord 2002;40:253-255.

“A 30 year-old lady had an electrical injury..when she was lifting an electrical wire lying across the road...She was brought to..hospital 13 months after electrocution because of residual neurological deficit..She had reduced attention span and impairment of recent and immediate memory.”

4. An ad hoc committee of LDC met on June 7, 2002 to discuss plans to proceed with the development of a Clinical Lightning Panel headed by Dr. Charles Mains and the Trauma Service. Those present: Drs. Mains, Scott London, Patrick Offner, Robert Madayag, Fred Seale, Edward Pulido, and Michael Cherington. Also present were Bob Wallace and Sue Wiggins. We discussed clinical protocols, outreach programs, funding issues. I am very optimistic about this new direction taken by St. Anthony Hospital and LDC.
5. John Gookin, Curriculum Manager of The National Outdoor Leadership School (NOLS) of Lander Wyoming, sent the following quote of Josh Sexton, Seattle:

“I saw the rain starting, and I yelled to my friend, ‘Dude, we should hurry!’ and then the lightning just hit.”
6. Last month, Bob Glancy of the National Weather Service provided us with a Lightning Safety Poster (NOAA) that now is displayed in the corridor of the Medical Staff Offices. The safety message is an important one. Portrayed on the poster are several people engaged in outdoor activities including: golf, bicycling, soccer, track, and baseball. Dr. John Nichols, a very observant neurosurgeon on our staff reported to us about a “safety glitch” on the poster. John, an avid bicyclist, noticed that the bicyclist on the poster is not wearing a protective helmet.
7. Our speaker today – Charles Mains, MD. His topic: Cardiac Electrical Activity in the Context of Lightning Strikes. Charles is the Trauma Service Director. He gave an outstanding presentation that brought out much audience discussion. I cannot do justice to Charles’ talk by trying to summarize it here. I will list here the notes that I took during his presentation:
 - A. Charles started by giving interesting historical facts about the St. Anthony Trauma Service:
 - a. St. Anthony’s Flight for Life was the first hospital-based transport system in the United States. It was based on the Swiss Air Transport System. Flight for Life has saved thousands of lives. Early pioneers were Drs Henry Cleveland, Boyd Bigelow, and Dan Drakin. These physicians and others helped to initiate Trauma Room 10 that still exists to treat major trauma patients.
 - b. St. Anthony Hospital is the busiest trauma center in Colorado.
 - c. Flight for Life Critical Care Ground units are available for situations where patients can be take by air.
 - B. Patients with electrical trauma burns – early fluid resuscitation is often critical. Some patients have rhabdomyolysis and subsequent kidney failure.
 - C. Charles two questions that triggered much discussion:
 - a. Given that lightning current = 2×10^5 , and heat is enormous, why are there not more fatalities? Several in the group suggested the short duration of exposure is one factor.
 - b. Why is MRI testing safe (machine – 1.5 Tesla)? Why are not patients injured during the procedure?

8. Rick Russon has helped in getting us a new website address that is easier to access than our old address. I'll ask Sue Wiggins to attach our new website address to our minutes.

LDC website address:

www.stanthonyldc.org

9. These minutes reflect the comments of members present and do not represent official position of LDC.
10. Next meeting: Friday, July 12, 2002 at 11:30 am in the Main Auditorium of St. Anthony Hospital Central.

Program: Round Table Discussion

Two topics already on the Table:

- a. Question raised by Rick Russon: Lightning can cause forest fires. Can forest fires cause lightning?
- b. Ferning patterns. Clinical aspects. ?hemoconcentration? Gil McDonough will share his thoughts.

Respectfully submitted,

Michael Cherington, MD