

LIGHTNING DATA CENTER MINUTES

December 8, 2023

ST. ANTHONY HOSPITAL, LAKEWOOD, COLORADO

SEASON'S GREETINGS!

Members present: Clark, Langford, Crow, Ellis, Weiss, Brewer, Yarnell, Stemple and Rossie.
Meeting began at 11:45 AM and ended at 1:47 PM.

1. The LDC is accepting donations, either as cash or check. If you donate via check, please make your check payable to Steve Clark at 755 S. Clinton Street, #2A; Denver, CO 80247. He will cash the check and keep the cash holdings specifically for the LDC. When the LDC incurs expenses, Steve will pay for services rendered through his bank account using the cash from LDC's cash holdings. A log will be maintained detailing the inflow and outflow of monies. LDC currently has \$242.00 in cash.
2. We met with Rick van Ruler, the corresponding author of a research paper which proposes an evidence-based protocol for the treatment of the lightning patient. Mr. van Ruler presented the paper at the European Emergency Medicine Congress in 2021. Here follows my incomplete summary of his presentation.

He started his presentation by playing the video of the lightning strike to a tree in India that showed four people standing under the tree and falling down after the lightning hit. He said treatment should follow the guidelines of ATLS (Advanced Trauma Life Support, a registered Trademark). Reverse triage, the treatment of those who appear to be dead, should be performed first. Spinal immobilization should be performed since the patient could have fallen, as demonstrated by the video. Every patient with a suspected strike should be presented to a hospital.

Four important sets of tests should be performed: lab tests, EKG tests, repeated neurologic exams and assessments of the eyes and ears.

A high percentage of lightning patients have sequelae, most of which are neurological.

The evidence used in the study was of low to moderate quality, as graded starting with the Levels of Evidence 2 Table of the Oxford Center for Evidence-Based Medicine, followed by SANRA and AGREE II. To start, 536 literature sources were considered and after the grading, only 56 were utilized in this paper. He said the lack of a systematic methodology in the included articles was the leading cause of the evidence being graded at low to moderate quality.

Two future research items arose from this study. First, the benefit of extended resuscitation of lightning patients needs to be better defined. Second, an online database of systemic reporting of lightning injuries is needed. This should include more detailed and specific reporting of injuries and their treatment.

3. Following the presentation there was quite a bit of discussion.

Ken Langford asked Mr. van Ruler if he was interested in continuing his education or starting his career. Mr. van Ruler said he is considering some options, among which are internships abroad.

Cynthia Weiss has offered assistance in writing grants and setting up a 501c3 entity.

Barbara Brewer has started a non-profit entity called “A Bolt of Hope” and has a website which is a place for lightning survivors and their families to tell their stories in depth. See link below.

Dr. Phil Yarnell mentioned the work of Dr. Nicholas Schiff. He and his colleagues performed tests of implanted electrodes in 5 people with moderate to severe traumatic brain injury. All five people showed improved performance on cognitive tests.

We had four survivors at our meeting, who shared some of their experiences and the experiences of other survivors with the health care system – especially at the start of treatment. Many of the physicians they saw did not know what to do for lightning patients. Survivors have been told they should be dead if they were hit by lightning; that their complaints were not caused by lightning, but from something else; and to “get over” whatever it is that is bothering them. To that last comment, George Rossie pointed out that neurological issues wax and wane with time. As Cynthia Weiss put it: “Some days are better than others.”

4. LDC welcomes your questions. Please send them via e-mail to Steve Clark at sclarktoto@gmail.com. Your medical questions will be forwarded to Dr. Phil Yarnell for his review and will usually be taken up for discussion in the next month’s meeting. Please be advised any questions posed are for the general consideration by the group and any answers given do not constitute a formal medical opinion. If a formal evaluation is requested, arrangements can be made directly with Dr. Yarnell. If you have a medical emergency, please call 911 or your local EMS.
5. Questions, comments, error notifications, and critiques of these minutes are welcome. Please send them to Steve Clark. Please keep the communications professional and respectful. They will be forwarded to the appropriate author(s) of the minutes and addressed accordingly.
6. LDC Disclaimer: These minutes do not represent official positions of the LDC or its members. They simply reflect the comments made at the meeting. Furthermore, the LDC does not implicitly or explicitly recommend or endorse any product or service. Any product or service presented in these minutes is done so for purposes of discussion and analysis. The merit (or lack thereof) is open for the consideration and review by the entire membership.

7. Next meeting: Friday, January 12, 2024, from 11:45 AM to 1:00 PM MST.

Respectfully Submitted,
Steven E. Clark, Consulting Meteorologist

Lightning Links

This is a monthly listing of periodicals, websites, and videos about lightning and allied areas from a variety of sources. A headline or description is listed, followed by the link. Please note that some of the links are perishable, which means you'll need to go to the source for the information.

Sky Lightning Sector 82 Gurugram Haryana India

Link: <https://mail.google.com/mail/u/0/#inbox/FMfcgxwLswDnzTLLzMvRIDtwVBTfrCXv?Projector=1>

A Bolt of Hope. Link: <https://www.aboltofhope.com/>

Schiff, N., et.al., 2023: Thalamic Deep Brain Stimulation in Traumatic Brain Injury: A Phase 1, Randomized Feasibility Study. *Nature Medicine*. December 4, 2023. (Abstract Only):

Link: <https://www.nature.com/articles/s41591-023-02638-4>

Zimmer, C., 2023: Brain Implants Helped 5 People Toward Recovery. *New York Times as cited in the Denver Post*. December 5, 2023, p. 13.
