



Creating a Regional Curriculum for Anesthesia Providers in Daboase, Ghana: Challenges and Learning Points

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Background

Low- and middle-income countries continue to encounter barriers to safe anesthetic care due to limited resources (such as anesthesia machines, oxygen, and pulse oximeters). Regional anesthesia techniques allow providers to care for patients safely while reducing the need for the aforementioned equipment. Our initial plan to travel to Kumasi, Ghana in January 2022 to teach regional anesthesia was halted due to COVID travel restrictions. However, Dr. Abdullah's general surgery team from Ann & Robert H. Lurie Children Hospital was working with the organization "Humanity First" to teach a week-long CME course in Daboase, Ghana, and wished to collaborate on a regional anesthesia curriculum. This is a qualitative review of a four-week virtual Global Health elective in January 2022 to create a regional anesthesia curriculum for a group of providers in Daboase, Ghana.

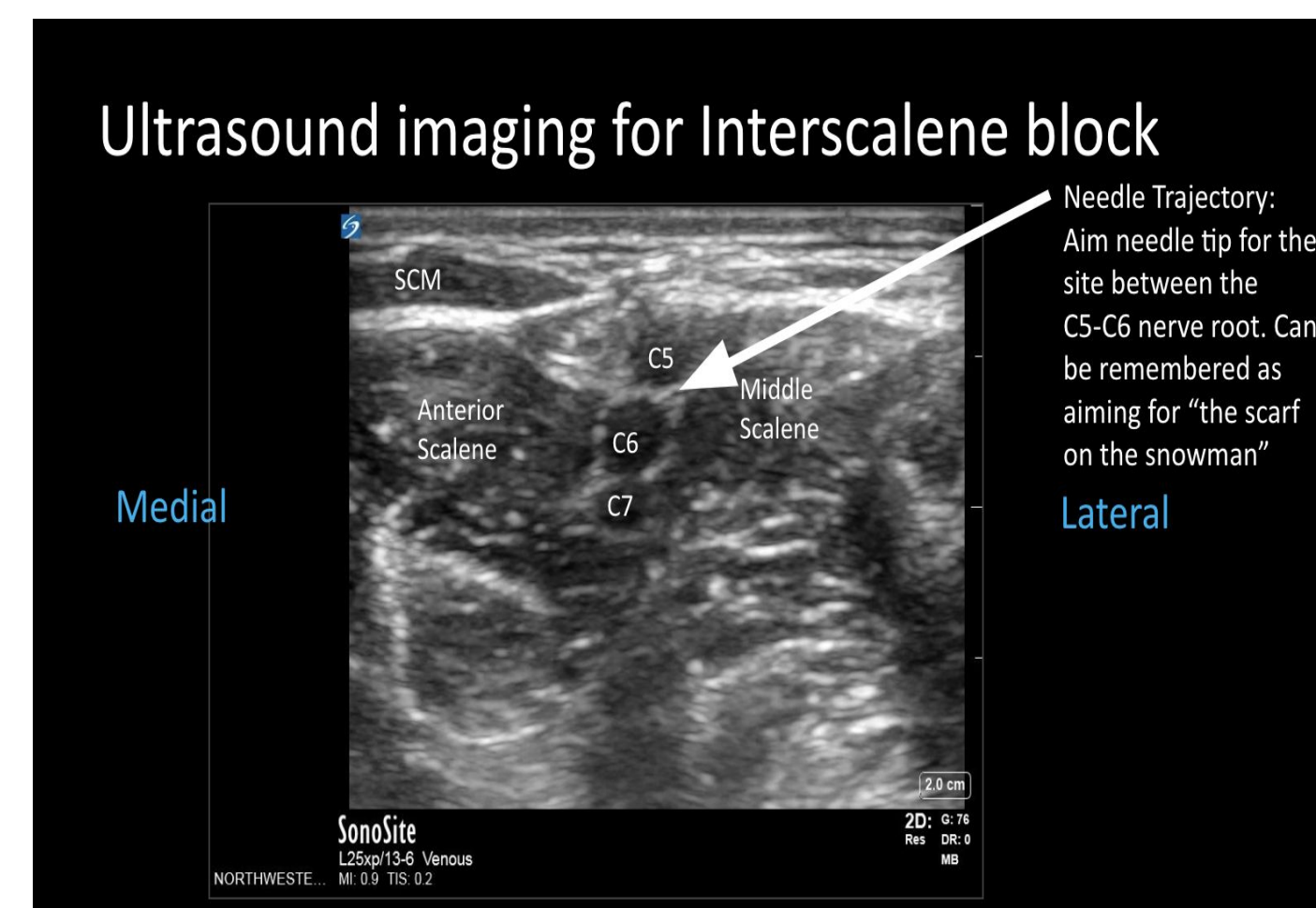
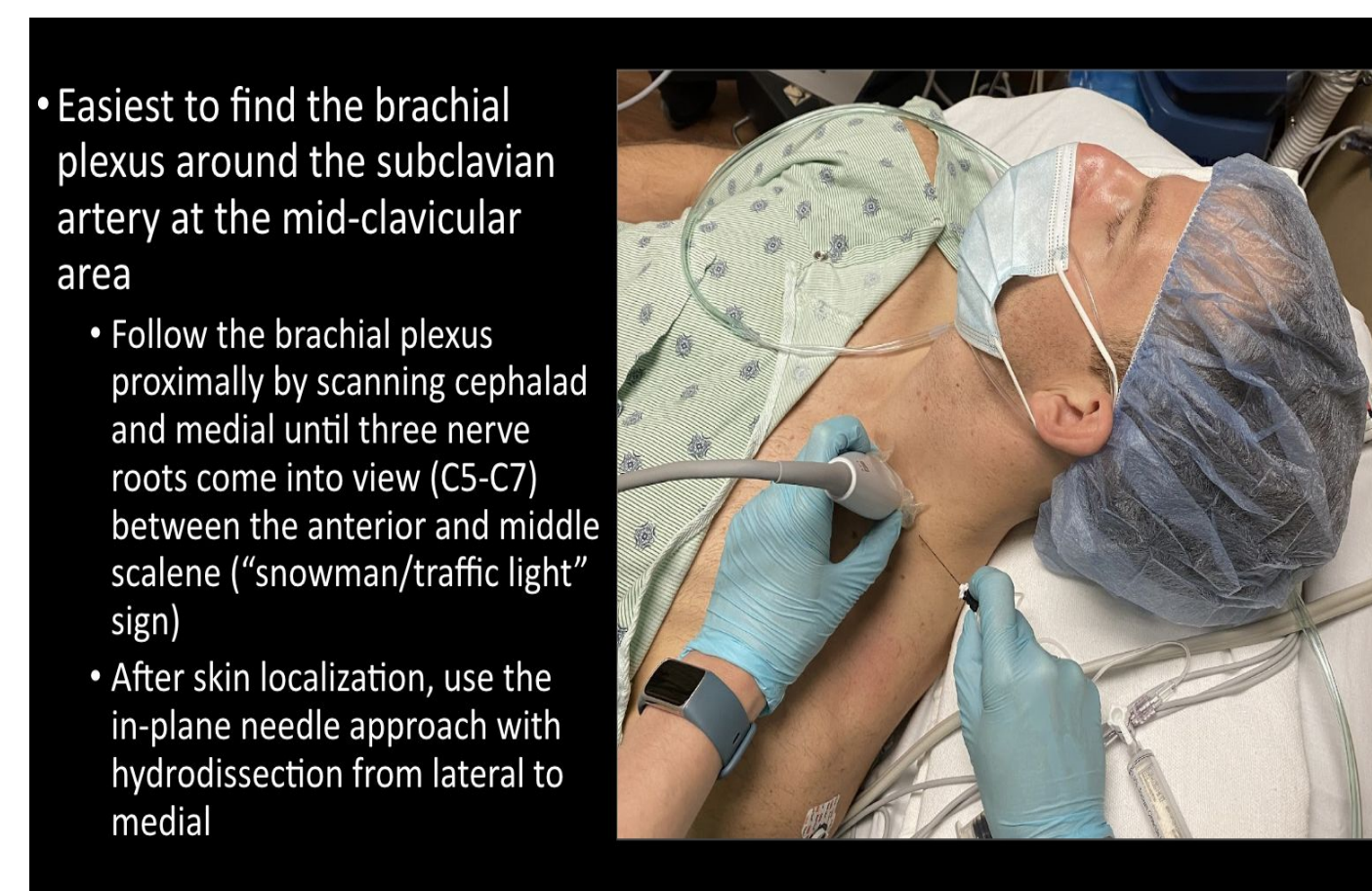
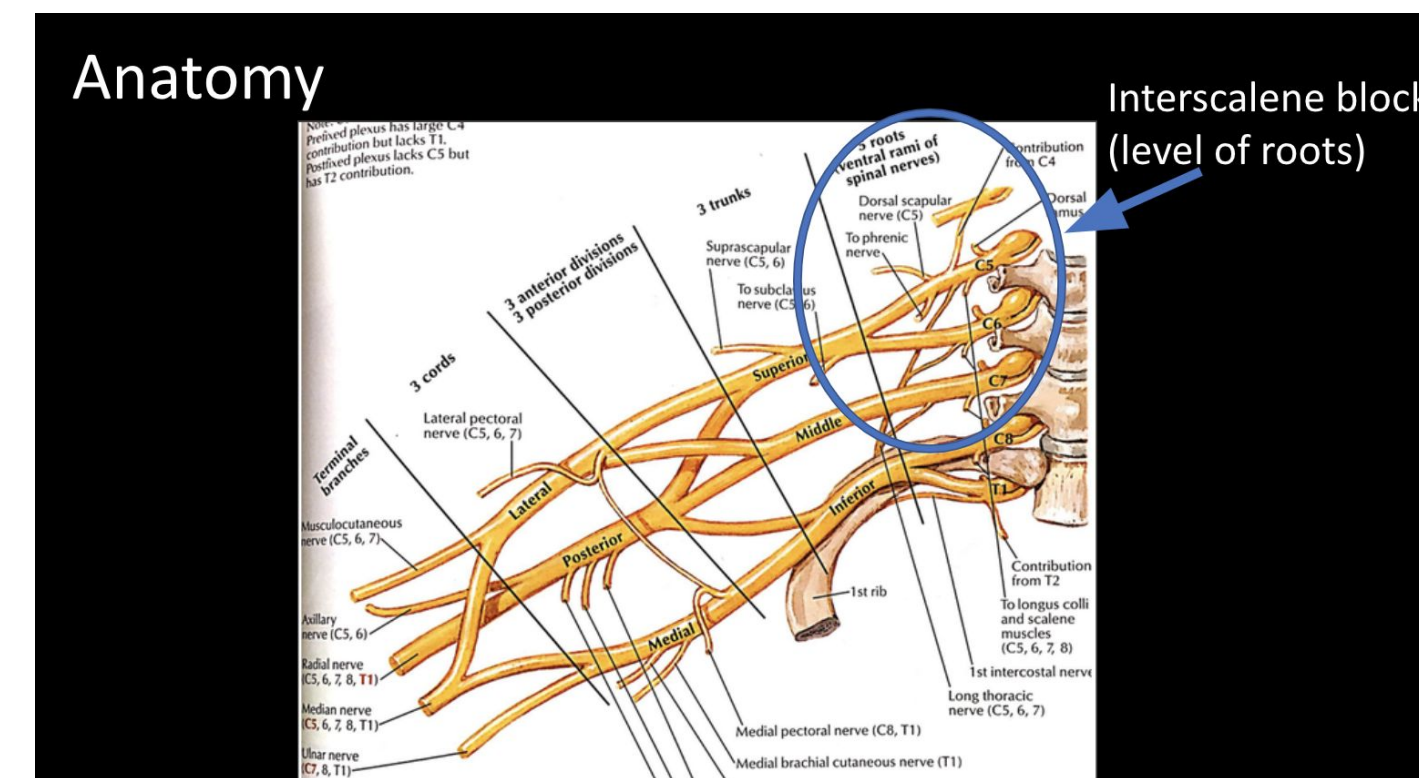
Research Objectives

- Create an online regional anesthesia curriculum and module system that can be used to teach anesthesia skills remotely during the COVID-19 pandemic

Methods

- Three anesthesia residents along with one anesthesia attending created a regional anesthesia curriculum to educate providers on ultrasound basics, local anesthetic dosing and toxicity, block setup and safety, and eight basic anesthetic/analgesic nerve blocks that covered the upper extremities, lower extremities, and the trunk. Time was also spent creating media to illustrate and demonstrate these blocks.
- The curriculum was created in Chicago, IL, over a four-week period and provided to Dr. Abdullah's team and the organization "Humanity First" for a week-long CME course in Daboase, Ghana, from February 16th-27th, 2022.
- Feedback was provided by the Ghanaian providers and relayed back to the curriculum authors.

Example: Interscalene peripheral nerve block



Results

Feedback
"Ghana was a good first start for the course. We immediately recognized that they were hoping for less theory and more hands-on"
"We don't think they understood what nerve blocks were useful for. We got the impression that they were more interested in labor epidurals but didn't know how to express themselves when they asked for ultrasound nerve blocks."
"A big hurdle is equipment. We had two Butterfly ultrasound that we used for demonstration, but they had no regional block ultrasound. The donated machine is best for abdominal and large nerve identification only"
"They were not sufficiently oriented to the field of regional anesthesia.... The course outline needs to be clear. That means giving a basic (very basic) description of the purpose of the blocks and their utility for post-op pain control."

Limitations

- Limited time frame to create these modules and receive real-time feedbacks
- Due to change in travel plan, there is a lack of familiarity with the new targeted audience, their knowledge level, equipment availability and desired contents
- Challenge with teaching procedural skills remotely without in-person demonstrations by anesthesiologists

Conclusions

The creators of the curriculum were not present while it was being delivered to the Ghanaian providers due to the COVID-19 pandemic, which may have made it difficult for the Ghanaian providers to ask questions and clarify certain information. Even the feedback received was secondhand, which may pose a challenge to improving the curriculum to meet the Ghanaian providers' needs. While a basic regional anesthesia curriculum was created for the Ghanaian providers during this project, this experience highlights the challenges of global health capacity building while working remotely during the COVID-19 pandemic.