Project Title: An airway pressure device for use in an MRI machine

Team Members:
Laura Sheehan - Leader
Jon Cappel – Communications
Noelle Simatic – BWIG
Kevin Johnson – BSAC

Client: Victor Haughton, M.D.
UW Department of Radiology
3252 Clinical Science Center-E3
Phone: 263-5306
email: vmhaughton@facstaff.wisc.edu

Advisor: Mitch Tyler

Date: 10/14/05 – 10/20/05

Problem Statement: Our client Dr. Haughton is currently studying CSF flow during Valsalva maneuvers performed by children with Chiari I malformations. Current research suggests that CSF flow decreases during Valsalva maneuvers in these patients. The airway pressure device would help monitor the exhalation force exerted by each child during a Valsalva maneuver in the MR suite. Knowing the pressure exerted by each patient in the study would be extremely beneficial for data analysis and accuracy.

Last Week’s Goals:
• Meet with client to discuss Midsemester presentation
• Obtain client feedback on mouthpiece selection
• Discuss sanitation techniques with Matt O’Brien
• Order parts (transducer, voltage meter, valve)
• Test the transducer in the scanner
• Evaluate transducer placement

Individual Goals:
Laura – Progress report, contact Matt O’Brien
Jon – Compile list of parts to order
Noelle – Work on project website
Kevin – Test the transducer placement

Summary of Accomplishments:
• Gave midsemester presentation
• Contacted client to set up a meeting
• Contacted Matt O’Brien regarding sanitation techniques
• Tested transducer in the scanner
This Week’s Goals:
- Meet with client to discuss Midsemester presentation
- Obtain client feedback on mouthpiece selection
- Order parts (transducer, voltage meter, valve)
- Begin prototyping

Project Difficulties: None

Activities:
- Laura – Progress report, in-class meeting: 3 hours
- Jon – In-class meeting, notebook work: 3 hours
- Noelle – Work on project website, in-class meeting: 3 hours
- Kevin – In-class meeting, transducer testing: 3 hours

Team Total Hours for this Week: 12 hours

Project Schedule: