

Applications

- Initial assessment of ICP in trauma patients
- Monitoring patients susceptible to elevated ICP
- Decision tool before turning to invasive techniques
- Useful for roughly locating epidural and subdural hematomas

Advantages

- Easy to use without risk of complications
- Low cost device
- Reliable between measurements
- Portable

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Market Need

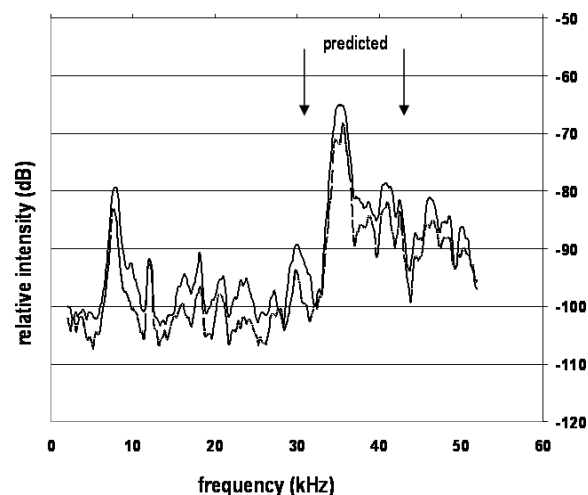
Intracranial pressure (ICP) monitoring requires invasive insertion of catheters into the skull. These procedures are fairly complex and can lead to complications even when performed by expert clinicians. Each year in the U.S, there are 10 million patients with conditions that can lead to elevated ICP. A number of noninvasive techniques have been proposed, but, to our knowledge, many of these techniques do not accurately access ICP.

Technology Summary

This is a noninvasive method for monitoring ICP that overcomes the shortcomings of the existing technologies. This device uses acoustic energy applied to one area of the head along with two acoustic sensors applied to another position on the head and to the eye or eyelid. The eye serves as a “window” into the brain, giving a reading that is linearly proportional to ICP. This invention provides a non-invasive, low cost, easy to use ICP assessment tool for emergency rooms and first responder settings.



eye resonance



Technology Status

U.S patent Issued: 8,172,769

This technology is available for licensing to industry for further development and commercialization.