Novel device for sealing perforations following dural puncture
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ABSTRACT
Unintentional dural puncture can lead to post-dural puncture headache. Garcia-Vitoria et al examined the efficacy of a new device that allows sealing a dural puncture. The authors performed their study on an animal model and found a reduction in cerebrospinal fluid (CSF) leak in the group of sheep that received the intervention. This device may be potentially tested in humans to examine their efficacy in reducing CSF leak in human subjects who may have a dural puncture.

Design
Forty six Anesthetized sheep were studied in a single blind randomized controlled fashion
They were divided into 2 groups, all received a dural puncture, followed by injection of contrast. Twenty three animals received the intervention.
CT scan was then used to detect contrast leakage in both groups.
Investigators indicated less leak in animals that received the intervention using the sealing device.

Conclusion
Device is possibly an effective way of preventing CSF leak if applied immediately after dural puncture.

Figure 2: Implant deployed. a = the terminal end of the barbed thread has been modified to be wider in diameter than orifice in the patch to anchor it into the patch; b = the first millimeter of the thread is devoid of spines; c = implant; d = cannula positioned at tip of Tuohy

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