

Epidural fibrin glue (Bio Glue) blood patch as treatment for persistent cerebrospinal fluid leak: Case study.

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Abstract:

Introduction: Delayed persistent leak of cerebrospinal fluid is a rare but possible complication following insertion of an intrathecal pain pump insertion. The patient is a 36-year-old lady with history of RSD of bilateral lower extremities who complained of headache and swelling and pain over the catheter site four months after insertion. A seroma was identified adjacent to the catheter, aspiration of the fluid revealed presence of beta transferrin in the fluid confirming a CSF leak. After conservative management and 2 epidural blood patches, application of fibrin glue was performed. Aspiration of the fluid with subsequent analysis confirmed the presence of beta transferrin in the fluid, therefore confirming that the fluid is actually CSF which is leaking through the intrathecal catheter insertion site. Occlusive dressings by application of compression dressing and bandages in the low lumbar area in attempts to seal the CSF leak, however every time the dressing was removed, the fluid started to collect again in the subcutaneous tissue. Decision was made to inject fibrin glue in the epidural space close to the catheter insertion site. Methods: The patient was brought to outpatient surgery suite and given monitored anesthesia as needed. With C-arm guidance, an 18-gauge Tuohy needle was advanced into L3-L4 intervertebral space in close proximity to the intrathecal catheter. C-arm was used for guidance of the Tuohy needle to avoid potential damage of the intrathecal catheter. The Tuohy needle entered the epidural space about 5 cm laterally to the left from the intrathecal catheter at the level of L3-L4. Injecting IV contrast revealed good epidurogram. Two milliliters of Bio Glue was injected through the needle, and the needle was withdrawn, sterile dressing was applied. Results: One week after injection patient

started to report decreased swelling over well- healed catheter insertion incision and improvement of headache. There is complete resolution of CSF leak following Bio glue application. Conclusions: There is limited research on how to manage the rare but possible persistent CSF leak. The use of a fibrin glue blood patch has been found to be effective in this case.