Purpose: Report unusual development of PDPH symptoms and safety blood patches.

Clinical Features: Parents and patient's consent was obtained for this report. The parents of a 4-year-old, 17kg girl had noted clear fluid dripping from the child's nose for as long as they could remember. An abnormality of the nasal cavity was noted during asthma workup. The patient did not have any neurologic symptoms. The child's medical history included asthma under control, twin severe prematurity (born at 26 weeks) and RDS requiring prolonged intubations. The child was developing well. A computerized tomography showed a skull base defect with an associated encephalocele. The patient was then scheduled for a transnasal endoscopic encephalocele repair with lumbar drain insertion.

A week later, patient underwent surgery. General anesthetic was started. Lumbar drain was placed with a 18g Tuohy needle. The procedure was reported to be difficult. The rest of the surgery was uncomplicated.

The lumbar drain remained in place for 5 days. The patient was then discharged home. A month later, the patient was brought to the hospital complaining of worsening frontal headaches, nausea and vomiting for 4 days. The mother of the patient reported that symptoms started after the patient fell on a sitting position off one flight of stairs. Physical exam showed no nasal discharge, supple neck, no meningismus. Sensory and motor exams were unchanged. Headache alleviated with recumbency. Admission blood work was within normal range. Blood and urine cultures were negative. MRI showed an intact encephalocele repair site and a normal looking brain, but fluid containing outpoutchings of the epidural space(L4-S1). Patient was discharged home, but came back 6 days after, with worsening symptoms. MRI was repeated and Pain service/Anesthesia was consulted for a blood patch.

The patient underwent general anesthesia with sevoflurane. Venipuncture took place and lactatering injection of 50 mL/h was started. The patient was then turned to left lateral decubitus and flexed back. Ultrasound of the spine determined the L5-S1 interspace level and needle depth. Ten mL of blood were drawn from another vein, but only 7mL were injected. Bradycardia was obvious 5 minutes after the procedure, when the patient was placed in the post-anesthesia care unit (PACU) monitors. The ECG showed a regular sinus rhythm of 50 bpm, systolic blood pressure remained in the low 90's. Patient was discharged after 2h of observation. At the ward, the patient remained bradycardic from the PACU discharge until around 6:00am, when the bradycardia spontaneously resolved.

In the next day, there was no improvement on symptoms. A second blood patch was booked for the following day. Identical general anesthetic was initiated. However we aimed to patch the L4-L5 interspace at that time. Thirteen mL of blood were injected, by the same anesthesiologist. The symptoms completely resolved in the next morning and patient home discharged after 24h of observation. The parents were contacted by phone after one week and then one year later. No recurrent symptomatology was reported by the parents and the child is developing well.

Conclusion: Blood patch is safe to be repeated in a child. The amount of blood to be used remains undetermined and may vary in the same patient.