PREOPERATIVE DIAGNOSIS:, Blocked ventriculoperitoneal shunt.,POSTOPERATIVE DIAGNOSIS:, Blocked ventriculoperitoneal shunt.,PROCEDURE: , Ventriculoperitoneal shunt revision with replacement of ventricular catheter and flushing of the distal end.,ANESTHESIA: , General.,HISTORY: , The patient is nonverbal. He is almost 3 years old. He presented with 2 months of irritability, vomiting, and increasing seizures. CT scan was not conclusive, but shuntogram shows no flow through the shunt.,DESCRIPTION OF PROCEDURE: , After induction of general anesthesia, the patient was placed supine on the operating room table with his head turned to the left. Scalp was clipped. He was prepped on the head, neck, chest and abdomen with ChloraPrep. Incisions were infiltrated with 0.5% Xylocaine with epinephrine 1:200,000. He received oxacillin.,He was then reprepped and draped in a sterile manner.,The frontal incision was reopened and extended along the valve. Subcutaneous sharp dissection with Bovie cautery was done to expose the shunt parts. I separated the ventricular catheter from the valve, and this was a medium pressure small contour Medtronic valve. There was some flow from the ventricular catheter, but not as much as I would expect. I removed the right-angled clip with a curette and then pulled out the ventricular catheter, and there was gushing of CSF under high pressure. So, I do believe that the catheter was obstructed, although inspection of the old catheter holes did not show any specific obstructions. A new Codman BACTISEAL catheter was placed through the same hole. I

replaced it several times because I wanted to be sure it was in the cavity. It entered easily and there was still just intermittent flow of CSF. The catheter irrigated very well and seemed to be patent.,I tested the distal system with an irrigation filled feeding tube, and there was excellent flow through the distal valve and catheter. So I did not think it was necessary to replace those at this time. The new catheter was trimmed to a total length of 8 cm and attached to the proximal end of the valve. The valve connection was secured to the pericranium with a #2-0 Ethibond suture. The wound was irrigated with bacitracin irrigation. The shunt pumped and refilled well. The wound was then closed with #4-0 Vicryl interrupted galeal suture and Steri-Strips on the skin. It was uncertain whether this will correct the problem or not, but we will continue to evaluate. If his abdominal pressure is too high, then he may need a different valve. This will be determined over time, but at this time, the shunt seemed to empty and refill easily. The patient tolerated the procedure well. No complications. Sponge and needle counts were correct. Blood loss was minimal. None replaced.