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LETTER TO THE EDITOR

CSF leak from epidural catheter site: a nightmare turned into reality

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Dear Editor:

A 55-year-old lady was admitted for surgery for rectal cancer (cT3N0MO). She had no significant medical history. She was planned for total mesorectal excision. In consultation with the patient, the anesthetists decided for combined general and epidural anesthesia. The 18-G epidural catheter was placed while the patient was awake in a sitting position at L2–L3 level by the midline approach. The skin was infiltrated with 2 % lignocaine and the epidural space was located easily with a 16-G Tuohy's needle by a loss of resistance technique at the first attempt. The catheter was threaded and advanced 5 cm into the epidural space without difficulty. Aspiration for blood and cerebrospinal fluid was negative. An epidural test dose of 6 ml of 0.25 % bupivacaine produced no effects. A sterile dressing was applied at the epidural catheter site. The patient was then placed in supine position, and general anesthesia was induced. The patient underwent total mesorectal excision with low anterior resection and diverting ileostomy. The surgery was uneventful. Prophylactic antibiotics (ceftriaxone 1 g and metronidazole 500 mg) were prescribed. The initial postoperative course of the patient was uneventful. The patient was allowed orally on second postoperative day. Additional top-ups of 6 ml of 0.25 % bupivacaine were given for 3 days for postoperative analgesia. The patient reported a wet back on fourth postoperative day. The epidural catheter site dressing was found completely soaked with clear fluid. The epidural catheter was removed intact. A hole of the size consistent with that of a 16-G epidural needle was noted at the insertion site and was weeping with clear fluid. The fluid tested positive for glucose with blood glucose reagent strip. A sterile occlusive dressing was applied. The patient was alert and no neurological abnormality was detected. She was managed conservatively with complete bed rest and adequate hydration. However, the fluid leak persisted and she developed erythema all around the epidural site. Her condition further deteriorated next day and she developed altered sensorium, hypotension, labored breathing, and thrombocytopenia. She was shifted to intensive care unit. She was intubated and put on ventilator. She was transfused with 10 units of platelets and was prescribed with injection meropenem (1 g, eight hourly) and gentamicin (750 mg, 24 hourly) besides hemodynamic support. Her relatives did not give consent for lumbar puncture (LP) for CSF analysis as they feared further CSF leak from the LP site. Her skin puncture site was closed with 3–0 nylon purse-string suture using local anesthesia in view of persistent fluid leak. Enteral feeding was given through nasogastric tube as ileostomy functioned normally. She gradually responded to the treatment in the next 48 h. The fluid stopped leaking from the epidural site. She made a complete recovery and was discharged on 15th postoperative day.

Persistent CSF leak from the epidural site is a very rare occurrence with only a few cases reported in the literature. Dural breach in these cases may result either from the inadvertent puncture by the epidural needle, post-procedural migration of the epidural catheter, or combined

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spinal–epidural anesthesia. A number of management modalities have been described in the literature including complete bed rest either in prone or in Trendelenburg position, maintaining strict asepsis, adequate hydration, broad-spectrum antibiotics, suture closure of the skin puncture site, epidural blood patch, and surgical closure of the tract. Though rare, meningitis is the most dreaded complication of persistent CSF leak especially seen in immune-compromised patients. This case is being highlighted to report a rare complication of epidural anesthesia which may prove life threatening and delay the postoperative recovery.