Journal of Pediatric Surgery (2012) 47, E33–E38

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Journal of Pediatric Surgery

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Post meningocele repair urinary ascites in a neonate—a rare presentation ☆

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Received 10 June 2011; revised 30 January 2012; accepted 31 January 2012

Key words:
Meningocele repair;
Urinary ascites;
Neonate

Abstract A full-term female neonate with a large lumbosacral meningocele developed sudden abdominal distension and urinary retention after meningocele repair. An erect abdominal radiograph showed homogeneously opacified areas with a paucity of intestinal gas. Abdominal ultrasound revealed ascites with multiple internal echoes. With a provisional diagnosis of hollow viscus perforation, an emergency laparotomy was performed, which failed to reveal any leak from the urinary tract. However, fluid analysis confirmed the diagnosis of urinary ascites. The patient developed repeated episodes of urinary retention after catheter removal. She was started on clean intermittent catheterization (CIC) to ensure adequate bladder drainage. At 6 months of follow-up, ultrasound of the urinary tract, voiding cystourethrogram, and magnetic resonance imaging of the spine were all within normal limits. The CIC was discontinued, and the patient was observed. At present, she is voiding normally with a good stream. Failure to establish normal micturition after meningocele repair and CIC requirements suggested a neurogenic cause. Bladder rupture, secondary to spinal shock resulting in bladder atonia, could not be ruled out. The perforation (leading to urinary ascites) could be owing to bladder atonia and spinal shock rather than detrusor sphincter dyssynergia.

Ascites in the neonatal period is most commonly urinary in origin and the end result of a leak from any area in the urinary tract. King [1] in 1836 was the first to report a case of urinary ascites in a fetus owing to rupture of the urinary bladder. Reports of urinary ascites in the neonatal period owing to bladder rupture have appeared sporadically since then. Most of the neonates were boys with obstructive pathologies such as posterior urethral valves as the cause of urinary ascites. Even more rare are cases of urinary ascites owing to nonobstructive urinary tract pathologies, seen mostly in female neonates. Those presenting at birth are associated with difficult labor, have a worse prognosis, and warrant prompt action. This report describes our experience in managing a case of urinary ascites after operative repair of a lumbosacral meningocele in a female neonate.

1. Case report

A full-term, 2.5-kg, female neonate presented with a large skin-covered transilluminating lumbosacral meningocele

☆ Conflict of interest: NIL.

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0022-3468/$ – see front matter © 2012 Elsevier Inc. All rights reserved.
doi:10.1016/j.jpedsurg.2012.01.074

(Fig. 1A and B). The lower limb motor power, bladder, and bowel continence were normal. An anocutaneous reflex was present. The infant had good tone, cry, and activity levels. There was no history of cyanosis or features of birth asphyxia. The systemic examination was essentially normal. The abdomen was soft and nontender on palpation. The infant passed urine normally. Echocardiogram and ultrasound of brain, kidneys, ureters, and bladder were within normal limits.

Meningocele repair was performed on day 6 of life and was uneventful. The infant was fine for the first 5 days after the procedure, was feeding well, and passed urine and feces normally with good wound healing. On sixth postoperative day, she developed sudden abdominal distension and urinary retention. The abdomen was dull on percussion, suggesting presence of free fluid. The bowel sounds were sluggish on

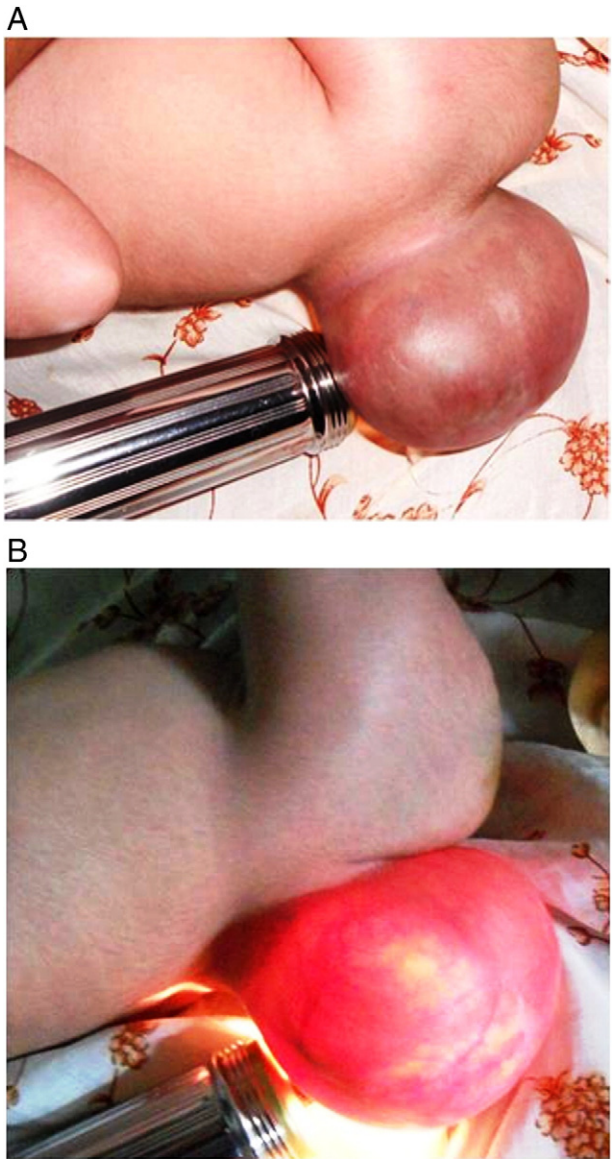

Fig. 1 A, Lumbosacral meningocele. B, Transillumination of the meningocele.

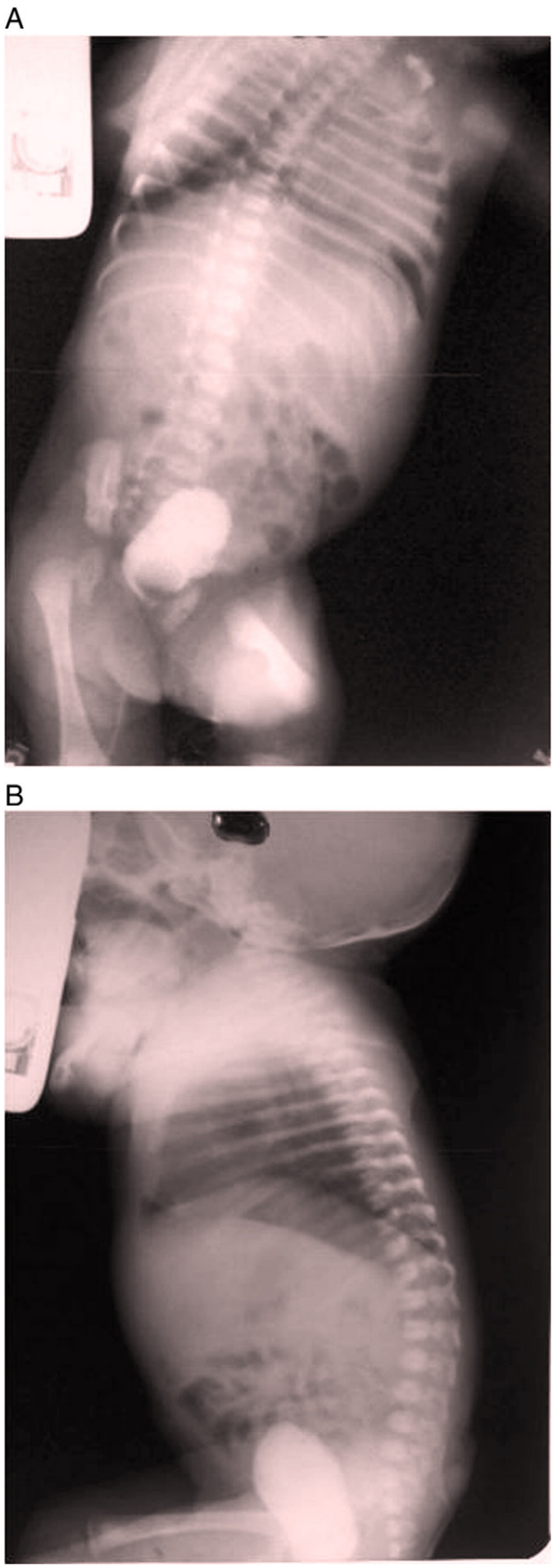

Fig. 2 Anteroposterior (A) and lateral (B) views of contrast cystogram on the 10th day after exploratory laparotomy showing no leak.