

URINARY INCONTINENCE AFTER INTRAVENOUS DEXAMETHASONE SODIUM PHOSPHATE INJECTION

Singapore Med J 2015; 56(3): 174 doi: 10.11622/smedj.2015043

Dear Sir,

We herein describe an unexpected case of severe perineal pain that gradually developed into urinary incontinence following a single 10-mg intravenous injection of dexamethasone sodium phosphate.

A 25-year-old man was scheduled for nasal septal reconstruction and maxillary sinus cyst removal via reconstruction under nasal endoscope. Before the induction of anaesthesia in the operating room, a single 10-mg dose of dexamethasone sodium phosphate (product batch no.: 1208296432, Chen Xin Pharmaceutical Co Ltd, Jining, China) was administered intravenously to the patient. The patient immediately complained of severe itching, burning and numbness, which were confined to the perineal region. General anaesthesia was induced to relieve his discomfort. The patient was extubated at the end of the 1-hour surgery and recovered from the effects of anaesthesia without complaints of discomfort at the perineal region.

Urinary incontinence developed 3 hours after surgery, and the patient described his urination as uncontrolled and intermittent, not accompanied by urination urgency and urodynia. Physical examination revealed that the bladder was not filled. The patient refused urethral catheterisation and bladder imaging. Nevertheless, the symptoms and condition gradually improved within 1 hour, and the patient fully recovered 28 hours postoperatively.

However, 42 hours after surgery, the patient developed itching and urticaria of the skin on his anterior chest. As this occurrence was thought to be due to drug allergy, the attending doctor administered a 10-mg dose of dexamethasone sodium phosphate for anti-allergy treatment. The discomfort at the perineal region immediately reoccurred and the patient again developed gradual urinary incontinence in the following 3 hours. He recovered within the next 18 hours without any sequelae, and was discharged from the hospital on postoperative Day 4.

The mechanism of urinary incontinence is unclear in this case. We suspect that phosphate ester could have led to dysfunction of the pudendal nerve, which controls the sensory perception in the perineal region and urination. Various measures are available to prevent perineal discomfort, including administration of dexamethasone after induction of anaesthesia, administration of fentanyl prior to dexamethasone and dilution of dexamethasone to be given as a slow bolus.⁽¹⁻³⁾ We opine that corticosteroid phosphate esters play an important role in the development of urinary incontinence. Therefore, careful attention should be paid to the rare adverse effects of dexamethasone sodium phosphate and the prevention of such occurrences.

Yours sincerely,

Yong Hai Zhang¹, Fan Yang², Qing Hong Lei¹, Han Xiang Ma¹¹Department of Anaesthesiology, General Hospital of Ningxia Medical University, ²Department of Anaesthesiology, Ningxia Medical University, Yinchuan, China. mahanxiang@hotmail.com**REFERENCES**

1. Neff SP, Stapelberg F, Warmington A. Excruciating perineal pain after intravenous dexamethasone. *Anaesth Intensive Care* 2002; 30:370-1.
2. More on dexamethasone-induced perineal irritation. *N Engl J Med* 1986; 314:1643-4.
3. Rewari V, Garg R, Trikha A, Chandralekha. Fentanyl pretreatment for alleviation of perineal symptoms following preoperative administration of intravenous dexamethasone sodium phosphate--a prospective, randomized, double blind, placebo controlled study. *Middle East J Anaesthesiol* 2010; 20:803-8.