Perioperative steroid supplementation: Controversies continues!!

Sir,

Chronic steroid intake may result in suppression of hypothalamic-pituitary axis. These patients are susceptible to hemodynamic instability under stressful conditions such as anesthesia and surgery. There are no specific recommendations for perioperative steroid supplementation for these patients posted under regional anesthesia (RA). We report a case of 45-year-old patient with long-term steroid intake undergoing total hip replacement (THR) under neuraxial block without any perioperative steroid administration.

A 45-year-old male patient on 8 mg of dexamethasone for 2 years developed avascular necrosis of hip and was posted for THR. He had developed iatrogenic Cushing syndrome, so physician gradually tapered his steroid and for last 1 week before surgery, he was off steroid. His routine blood investigations were within normal limits except for very low level of serum cortisol (0.02 μg/ml), which was suggestive of adrenal suppression.

His preoperative hemodynamic parameters were normal. Surgery was conducted under combined spinal epidural anesthesia using bupivacaine and fentanyl. We did not administered steroid to this patient in perioperative period. We were ready with loaded syringes of injection hydrocortisone, to handle any emergency. Surgery lasted for 4 h and patient remained hemodynamically stable throughout procedure. Recovery was uneventful and patient was discharged home after 5 days.

There are various recommendations regarding dosing and schedule of perioperative steroid supplementation in patient with chronic steroid intake suggesting that lack of adequate dosing of steroid can result in significant morbidity and mortality.[1,2] On the other hand, some discourage administration of steroid in view of exposing the patient to side effects of high dose of steroid without actual benefit.[3] Kelly and Domajnko also addressed this controversial issue and suggested that most of the recommendations for

perioperative stress dosing are based on small retrospective studies only.[4]

Surgical stress response is blunted under RA as compared to general anesthesia due to prevention of nociceptive signals from extensive neural blockade.[5] As THR is an intermediate risk surgery and was conducted under RA, we avoided additional coverage of perioperative steroid. Although perioperative course of patient was uneventful, there was a dilemma for use of steroid due to lack of appropriate recommendations for patients undergoing surgery under RA. We think, probably no perioperative steroid supplementation is needed in these patients if posted under RA.

In view of paucity of supporting evidence for perioperative steroid administration in chronic steroid user undergoing surgery under RA, large prospective randomized trials are needed for formulation of specific guidelines.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Access this article online	
Website: www.saudija.org	**Quick Response Code**
DOI: 10.4103/1658-354X.203055	

How to cite this article: Sethi P, Choudhary D, Bhatia P, Bihani P. Perioperative steroid supplementation: Controversies continues!!. Saudi J Anaesth 2017;11:249-50.

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