Acute Severe Pancreatitis: A Dreadful Complication of Sodium Valproate

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To the Editor: Acute pancreatitis is a rare diagnosis in pediatrics. Valproic acid has been known to trigger this catastrophe in occasional young patients as an idiosyncratic reaction [1]. We describe a typically developing eight-year-old boy who presented to emergency department with acute abdomen (severe, diffuse non-radiating abdominal pain with non-bilious vomiting) and fever for 48 h. He was on oral valproate (30 mg/kg/d), phenobarbitone (3 mg/kg/d) and clonazepam (0.04 mg/kg/d) for his underlying epilepsy. He was diagnosed with super-refractory status epilepticus of unknown etiology nine months back and has been receiving antiepileptics since then. There was not any history of recent change in antiepileptic dosages. On examination, there was tachycardia (pulse rate = 120/min), tachypnea (respiratory rate = 38/min), diffuse abdominal tenderness and guarding. His hemogram revealed leukocytosis (12,760/cumm with 60% neutrophils) and low platelet count (118,000/cumm). Ultrasound abdomen and chest revealed mild ascites and bilateral minimal pleural effusion with non-visualization of pancreas. A working diagnosis of valproate induced acute pancreatitis was considered. Raised serum amylase (647 SU, normal = 28–100 SU) and serum lipase (514 SU, normal = 0–190 U/L) confirmed the presence of pancreatitis. Serum Valproic acid (VPA) level was within therapeutic range (56.68 mcg/ml, normal = 50–100 mcg/ml). Work up for infective etiology (dengue, rickettsia, chikungunya, coxsackie, cytomegalovirus) was negative. Child was made nil-per-oral and started on intravenous hydration with antibiotics (piperacillin tazobactam and metrogyl), proton pump

inhibitors and opioids for pain relief. VPA was immediately stopped and replaced with levetiracetam. On day 2 of hospitalization he developed hypoxia with increased pleural effusion, ascites and loose stools which responded to conservative management within 48–72 h. Child did not have any neurological issues during the stay and was discharged after 1 wk. Amylase levels got normalized (0.5 SU).

In any child on valproate therapy presenting with acute abdomen, pancreatitis should be suspected and investigated. The underlying mechanism of valproate induced pancreatitis is elucidative and may possibly be associated with free radical injury [2]. Pancreatitis can develop after weeks to years of initiation of VPA [3]. Majority of children will respond to timely withdrawal of valproic acid and conservative management [4]. However, occasional fatality is also reported [5]. Pediatricians should be aware of this sinister adverse reaction of VPA.

Compliance with Ethical Standards

Conflict of Interest None.

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