

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Ceftriaxone Induced Early Onset Pseudocholelithiasis In A Child: A Rare Case.

John Solomon P, Priya Margaret*, Alph Shirley S, Shaalini C.

Department of Paediatrics, Sree Balaji Medical College and Hospital, Chennai – 600 044, Tamil Nadu, India.

ABSTRACT

An eight years old male child was admitted to our hospital with fever, headache and vomiting for 2 days. He was initially treated outside. He was febrile, had conjunctival congestion and mild hepatomegaly. Within a few hours of admission he developed intense headache, had neck stiffness, and kernig's sign and Brudzinski's sign positive. CBC showed neutrophilia. CSF showed plenty of pus cells, protein 65 mg/dl and sugar 72mg /dl and gram stain no organisms. CSF and Blood culture no growth. He received injection ceftriaxone and amikacin. After 4 days he developed pain in the right hypochondrium. USG abdomen done 6 days after developing abdominal pain reported multiple calculi with sludge within the gall bladder, the largest calculus measuring 6mm. Ceftriaxone was stopped after a total of 10 days. 4 days after stopping ceftriaxone, abdominal pain disappeared. 10 days after stopping ceftriaxone, the gall stones completely disappeared.

Keywords: ceftriaxone, gallstones, abdominal pain

**Corresponding author*

CASE REPORT

An eight years old male child was admitted to the Paediatric Ward of Sree Balaji Medical College and Hospital with complaints of fever, headache and vomiting of 2 days duration. The fever was high grade, intermittent and not associated with rigor. The headache was bilateral more in the parietotemporal region with no aggravating or relieving factors. He had eight to ten episodes of vomiting per day that did not contain bile or blood. He was already treated outside before coming to our hospital. On examination he had a temperature of 101° F, had conjunctival congestion, no icterus or rash. Liver was palpable 3 cm below the right costal margin. Within a few hours of admission he developed intense headache and then altered sensorium. On examination he had neck rigidity and positive kernig's and brudzinski's sign. There was no papiledema. The CSF showed plenty of pus cells, protein 65mg/dl, sugar 72mg/dl. No organisms were seen in the CSF gram stain smear. CSF and Blood culture showed no growth in culture. CBC and peripheral smear showed neutrophilia and urine analysis showed no abnormality. He was started on injection ceftriaxone (100 mg/kg/day) and injection amikacin (15 mg/kg/day) Paediatric neurologist opinion confirmed the diagnosis of meningitis and a MRI Brain was asked for. MRI brain showed subtle hyper intensity in bilateral frontal sub cortical white matter and bilateral maxillary and right sphenoid sinusitis. Mantoux was negative. 4 days after receiving ceftriaxone he developed right upper quadrant pain. On examination there was hepatomegaly with a liver of 6 cm below the right costal margin but he was anicteric. An ultrasound of the abdomen done in the 10th day of ceftriaxone therapy showed multiple calculi with sludge within the gall bladder, the largest calculus was measuring 6 mm .

A Complete hemogram and LFT were done to rule out haemolytic anemia. They were normal. Reticulocyte count was 0.5% (not increased).

No more Injection ceftriaxone was given and he was monitored by serial ultrasound examinations. After four days of stopping ceftriaxone his abdominal pain disappeared. Follow up ultrasound showed that the gall stones were diminishing in size and they had completely disappeared by 10 days after stopping ceftriaxone.

DISCUSSION

Ceftriaxone, a third generation cephalosporin is a very potent drug and is used to treat patients with meningitis, osteomyelitis, pyelonephritis and may other serious infections [3]. Some patients who receive this antibiotic develop biliary sludge as it can bind with calcium ions and produce a precipitate [1]. A review of literature and case reports show that ultrasonography should be done to detect cholelithiasis when symptoms such as nausea, vomiting and abdominal pain appear in children who are being treated with ceftriaxone. If pseudolithiasis is found ceftriaxone should be stopped. As the pseudolithiasis resolves with the cessation of ceftriaxone surgery is not required [2]. It has been reported that prolonged treatment with ceftriaxone for more than 14 days and also a dose higher than the routinely recommended dose may cause calcium ceftriaxone precipitates in the gall bladder. But in our case the gallstone appeared within 6 days of treatment with the recommended dose of ceftriaxone. The patient did not suffer from acidosis, dehydration or renal failure and he was not on TPN [4-8].

CONCLUSION

It is concluded that while children are on ceftriaxone treatment if they develop abdominal pain ultrasound abdomen should be done and if gallstones are seen the drug should be changed. Surgical intervention is usually not required.

REFERENCES

- [1] Park HZ, Lee SP, Schy AL. Gastroenterol 1991;100(6):1665-70
- [2] Bonnet JP, Abid L, Dabhar A, et al. Eur J Pediatr Surg 2000;10(6):368-71
- [3] Rodríguez Rangel DA, Pinilla Orejarena AP, Bustacara Diaz M, et al. Ann Pediatr (Barc) 2014;80(2):77-80.
- [4] Schaad UB, Wedgwood-Krucko J, Tschaeppler H. Lancet 1988;2(8625):1411-3.
- [5] De Moor RA, Egberts GC, Schroder CH. Eur J Pediatr 1999;158:975-7.



- [6] Edwards IR, Aronson JK. Lancet 2000;356:1255–9.
[7] Acun C, Erdem LO, Sogut A, Erdem CZ, Tomac N, Gundogdu S. Pediatr Int 2004;46:368–70.
[8] Herek O, Pakdemirli E, Kocer N. Eur Radiol 2001;11:902.