

Enrofloxacin poisoning in Humans – A Rare Case Report

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Abstract

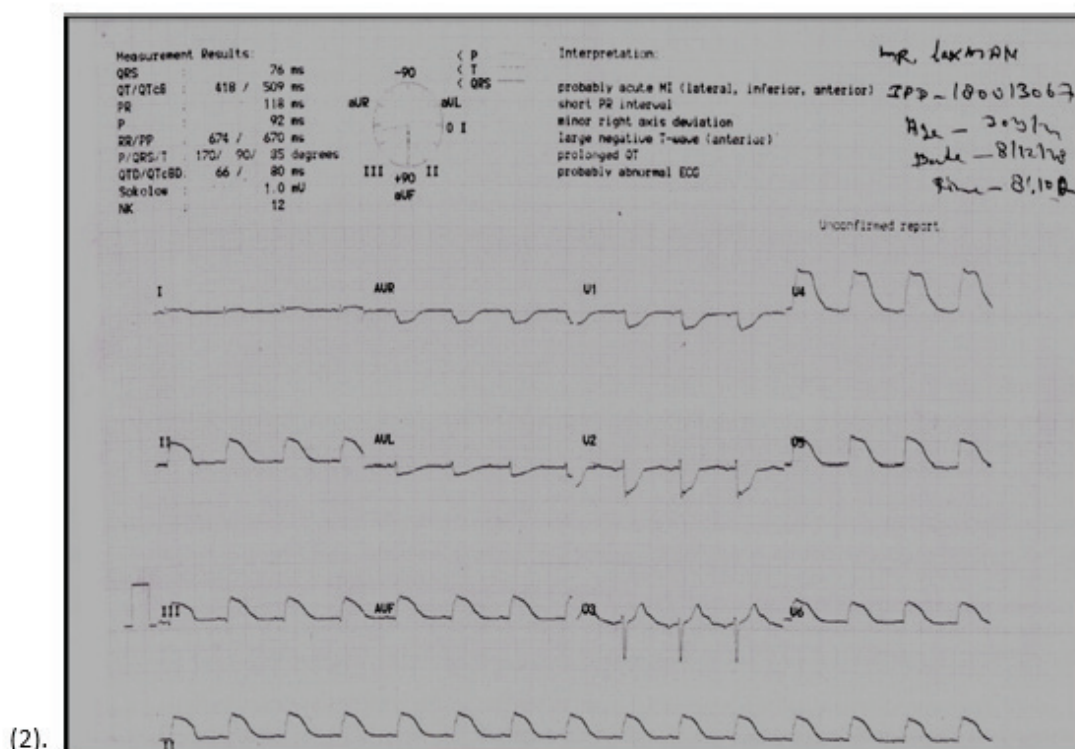
Enrofloxacin flouroquinolone - Veterinary Medicine. It has the general effect of the class of flouroquinolone. This poison is rarely reported in human. We present a case of Enro poisoning. Patient ingested Enrofloxacin. Which was followed by seizures and altered sensorium .Patient was taken on mechanical ventilator. He was managed symptomatically .He developed ST-T changes in ECG. But coronary angio was normal. We also tried doing plasmapheresis. But patient expired even after all efforts. The best of our knowledge, we did not find any such reported case of enro poison in Human .Hence we present this case report.

Key Words: Enrofloxacin, Poisoning, Flouroquinolone

Introduction

Enrofloxacin is a synthetic chemotherapeutic agent from the class of the flouroquinolone carboxylic acid derivatives, acting against a variety of Gram Negative and Gram Positive Bacilli, in veterinary medicine. It is

generally administered by subcutaneous injection and intramuscular injection to Pigs, and Chickens for the treatment of infection of the respiratory and alimentary tract⁽¹⁾ We present a case report of its use in human, which is a rare presentation.



Case Report

A 30 year old male, was brought to the Emergency Department in an unconscious, gasping state. The history was given by the attendant who revealed that the patient developed headache, vomiting and frothing from the mouth around 8-10 hours back. It was followed by generalized seizures which lasted for around two minutes. However there was no history of fever. Patient developed seizures and was taken to a local hospital .He was given primary care there and was referred to a private medical college hospital, There the patient was revived a loading dose of Inj. Epsolin. A CT scan of the Head was done, which was normal .Subsequently the attendant shifted the patient to our hospital. There was no significant past history.

The vitals in the ER were as follows:

Pulse: 95/min,

BP: Systolic 70,

Diastolic not recordable.

GCS: E, M, V (3/15).

Deep tender reflexes: Normal

Chest: Bilaterally clear and heart sounds normal, Shallow Breathing

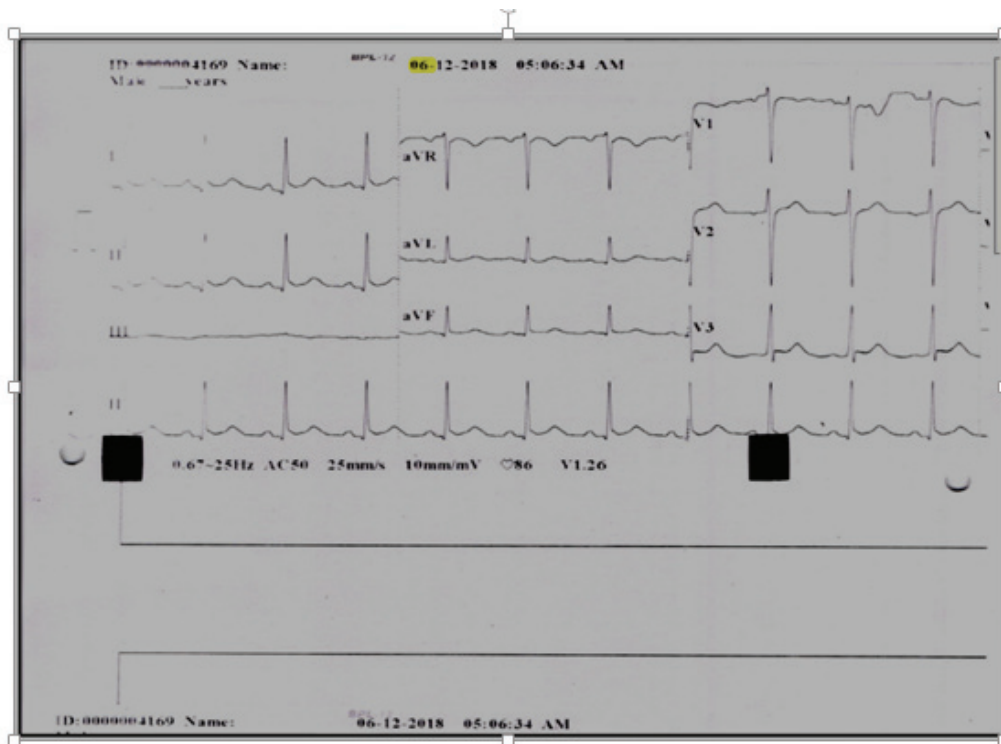
CVS: S1, S2

Looking at the gasping state, Patient was immediately intubated and taken on mechanical ventilation. IV fluids were administered and vasopressor support in the form of INJ. Nor Adrenaline was started.

ABG was done which showed metabolic acidosis with a PH: 7.02, HCO₃:7 Lactate: 12.8,

PCO₂:27, Po₂: 82.

ECG was normal (fig 1)



Total Leukocyte Count was 13,000. Liver and Renal functions were normal. A provisional diagnosis of Cerebrovascular accident was made.

However the hypotension remained unexplained .Another differential diagnosis was septic shock. But

the G.C.S of 3/5 remained unexplained with this looking at the age of the patient, frothing and hypotension a detailed history was again taken from the relatives.

On deep questioning ,it was revealed that he had consumed a bottle of Enrofloxacin ,an empty bottle of

which was found at home by family members. However the exact quantity consumed, could not be concluded.

Immediately symptomatic treatment was started in the form of gastric lavage, IV fluid and vasopressor. Soda-bi-carbonate was administered for the correction of metabolic acidosis, demonstrated on ABG. This gradually improved.

None of our team member had an experience of managing Enrofloxacin poisoning's, we searched the internet for this poisoning, but to our surprise, we did not find much literature about human exposure. All the evidence was in animal use.

A single session of plasmapheresis was also done in hope to eliminate the poison. But matter did not seem to improve.

MRI BRAIN was done, the very same day which came out to be normal and hence our provisional diagnosis was eventually ruled out.

On second day, patient developed significant ST elevation in ECG in multiple leads including inferior and lateral leads. (Fig 1). An urgent cardiology reference was taken.

Echocardiography showed a regional wall motion abnormality with EF 40%. An urgent Coronary angiogram was done which ruled out coronary blockage. But any significant lesion in coronaries was ruled out.

There was only 30% lesion in ostial part of left circumflex artery. This lesion was insufficient to explain the clinical findings.

Symptomatic treatment was continued. Patient developed further hypotension which becomes refractory to vasopressor. Urine Output started declining gradually.

Partially ultimately developed cardiac arrest and could not be revived.

Discussion

Enrofloxacin (CASRN: 93106-60-6) is a synthetic fluoroquinolone antibiotic for animal use only. Like other fluoroquinolone side effects include dizziness, drowsiness, disorientation, seizures, nausea, vomiting and tremors. Cardiovascular effect may include QT prolongation, Polymorphic Ventricular Tachycardia. Elevated liver enzymes and liver dysfunction have been reported following therapeutic use of fluoroquinolone. Other side effects may include joint or cartilage tenderness, photosensitivity and epidermal necrolysis. (2)

We were unable to find any reported human ingestion and toxicity.

Conflict of Interest : This is to certify that I Dr. Vipul Khandelwal the author of the Manuscript Enrofloxacin poisoning in Humans – A rare Case Report. Certify that there is no conflict of interest regarding this manuscript. (NIL)

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Ethical Clearance: Taken From **Institutional Ethical Committee.**

References

1. Committee for veterinary Medicine Products – The European Agency for the evaluation of Medicine Products Veterinary Medicine Evaluation Unit - EMEA/MRL/389/98- Final July 1998
2. Enrofloxacin – Toxnet – Toxicity Data Network – U.S National Library of Medicine.