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CASE IMAGE

Torsades de pointes due to oral sitafloxacin

Yugo Wakayama[1] | **Satoshi Yoshimura**[1] | **Katsuyuki Hanabusa**[2] | **Nobuhiro Ikeda**[1] | **Nobuhiro Miyamae**[1] | **Yasuyuki Sumida**[1]

[1]Department of Emergency Medicine, Rakuwakai Otowa Hospital, Kyoto, Japan

[2]Department of Cardiovascular Medicine, Rakuwakai Otowa Hospital, Kyoto, Japan

Correspondence
Satoshi Yoshimura, Department of Emergency Medicine, Rakuwakai Otowa Hospital, 2 Chinjicho, Otowa, Yamashina-ku, Kyoto 607-8062, Japan.
Email: yoshimura.satoshi.s34@kyoto-u.jp

A woman aged in her 80s had multiple comorbidities with congestive heart failure, aortic stenosis, and chronic renal failure. The QTc interval 6 months before admission was normal (454 ms) (Figure 1A). Three days pre-admission, the maximum dose of sitafloxacin was prescribed to treat urinary tract infections. She presented with convulsions, a complete atrioventricular block, a prolonged QTc interval (538 ms) (Figure 1B), and recurrent torsade de pointes (TdP) (Figure 1C). Treatment involved 2 g magnesium sulfate infusion, noninvasive positive pressure ventilation, and emergency pacing. After the heart failure management with discontinuation of sitafloxacin, the QTc interval was improved by 501 and 466 ms on day 7 and 20, respectively (Figure 1D,E). She remained healthy at 6-month follow-up. Oral quinolones are commonly prescribed antibiotics in clinical settings[1]; it could induce QT prolongation as *hERG* gene class effects on potassium channels and causes TdP, especially in the elderly.[1] Treatments are as follows[2,3]: external defibrillation, deep sedation with intubation, mechanical circulatory support, eliminating causes, intravenous magnesium sulfate irrelevant to the renal dysfunction, correct serum potassium level, isoproterenol infusion, and temporary overdrive pacing.[2,3] The dosage of quinolones should be adjusted according to renal function,[1] and should be prescribed based on age and comorbidities.

Satoshi Yoshimura is the guarantor of the clinical content of this submission.

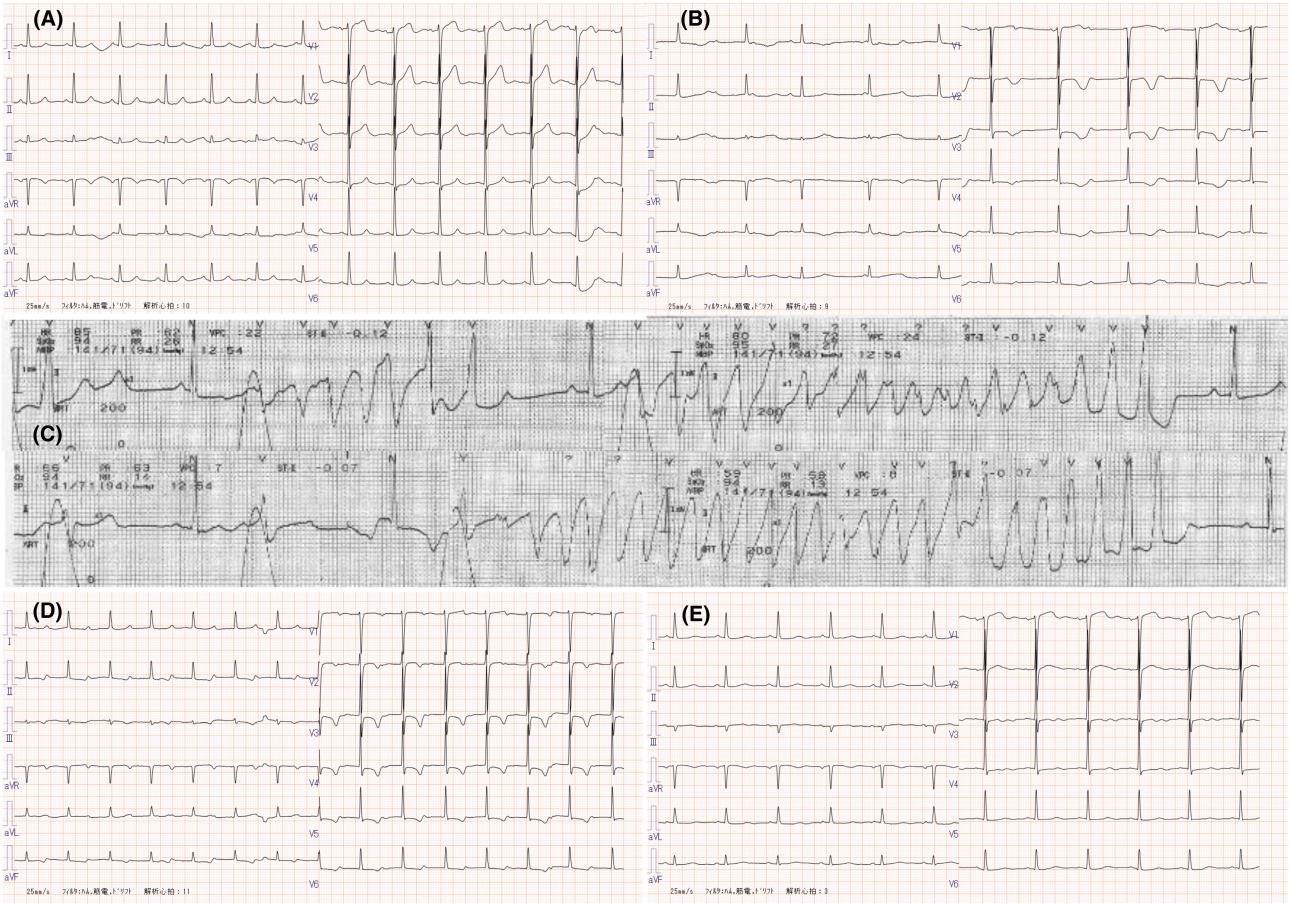

FIGURE 1 Electrocardiograms of a woman aged in her 80s treated with sitafloxacin. (A) Before admission. (B,C) After the maximum dose of sitafloxacin, showing a prolonged QTc interval (B) and recurrent torsade de pointes (C). (D,E) Day 7 (D) and day 20 (E) following the discontinuation of sitafloxacin.

CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ETHICS STATEMENT

Approval of the research protocol: N/A.
Informed consent: We obtained the informed consent from the patient for the publication of the report.
Registry and the registration no. of the study/trial: N/A.
Animal studies: N/A.

ORCID

Yasuyuki Sumida https://orcid.org/0000-0003-1067-0609

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