

## Terfenadine Overdose Induced Polymorphous Ventricular Tachycardia

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Terfenadine is a widely used, selective Histamine H<sup>1</sup> receptor antagonist. We report a 6 years old boy who developed symptomatic polymorphous ventricular tachycardia while receiving twice the recommended dose of the drug.

### Case Report

A 15 kg boy was operated for ventricular septal defect and pulmonic stenosis with corrected transposition of great vessels. He had congenital complete heart block recorded previously but because of adequate ventricle rate, no pacemaker was implanted. In the postoperative period, Holter monitoring revealed a ventricular rate 65/min, no ventricular ectopy. On 10th postoperative day, the patient had mild urticaria. All drugs were stopped and he was discharged on syrup terfenadine 15 mg twice daily and tablet lasilactone 1/4

daily. Inadvertently the patient continued to take 30 mg of terfenadine twice daily. He was readmitted after five days because of transient syncope. On admission, short bursts of polymorphous ventricular tachycardia were noted (*Fig. 1*). The corrected QT interval was normal. Cardiac status was otherwise unchanged. Serum sodium and potassium levels were 132 and 4.0 mEq/L, respectively. Serum magnesium and terfenadine levels could not be measured. The patient was given magnesium sulphate 250 mg in 20 minutes and monitored. No other treatment was given. The episodes became less frequent and disappeared after 48 hours.

### Discussion

Terfenadine is widely used in pediatric practice. Cardiotoxicity of terfenadine though reported, is not widely recognized(1). Ventricular tachycardia of torsades de pointes type have been reported in patients using terfenadine and ketoconazole(2,3). In these cases, ketoconazole induced microsomal enzyme suppression of terfenadine metabolism was considered responsible for higher terfenadine levels. More recently, similar interaction has been reported with erythromycin(4). Our patient received 4 mg/kg of terfenadine daily instead of the recommended 2 mg/kg. Whether bradycardia due to congenital complete heart block or post operative status made the child more prone to adverse effects of the drug at twice the recommended dose is speculative. Cardiotoxic effects with convulsions and prolonged QT interval in healthy adults ingesting double the intended dose or more has also been reported(5). The drug is not dialysable(6),

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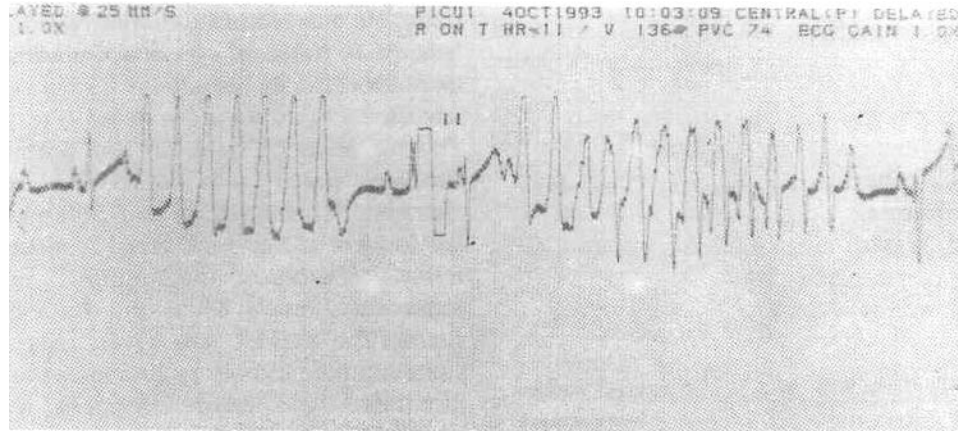


Fig. 1. *Polymorphous ventricular tachycardia observed on admission.*

and intravenous magnesium sulphate(7) as used in this case or overdrive pacing may be useful for treatment of ventricular tachycardia. Thus cardiotoxicity of terfenadine should be kept in mind in any patient with prolonged QT interval.

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