

Amiodarone-Induced Systemic Lupus Erythematosus

AK Kundu

Abstract

Drug-induced lupus is not a very common entity. Drugs like hydralazine, procainamide have been reported to induce lupus, but so far there is no case report of amiodarone-induced lupus in Indian literature. A case of atrial fibrillation in an elderly man who came with systemic features of lupus after amiodarone therapy for one and half years is reported.

INTRODUCTION

A syndrome resembling systemic lupus erythematosus (SLE) may be induced by long-continued use of several drugs like hydralazine, procainamide, isoniazid, D-penicillamine, practalol, methyl dopa, alpha-interferon, quinidine and possibly phenytoin, oral contraceptives and ethosuximide.¹ Drug-induced lupus (DIL) may be indistinguishable clinically from idiopathic SLE. Amiodarone, a class III antiarrhythmic drug is used in cardiac diseases like atrial fibrillation and flutter, ventricular tachycardia, paroxysmal tachyarrhythmias, and ventricular arrhythmias refractory to other treatment. This communication describes a patient of DIL on treatment with amiodarone for one and half years. This is possibly the third reported case of amiodarone-induced lupus in the world literature where the first case was reported by Susano R et al in 1999² and Sheikh et al in 2002.⁵

CASE REPORT

A 58 years male patient presented with fever (38°C), non-productive cough, arthralgia, and chest pain of two weeks' duration. He also complained of malaise, weakness, breathlessness on exertion, loss of appetite and weight loss of more than one month duration. He was non-smoker, non-alcoholic, non-hypertensive and non-diabetic; history of exposure was absent. There was no history of haemoptysis in the past. He was suffering from mitral stenosis with atrial fibrillation, and was on treatment with triamterene, benzthiazide and amiodarone (200 mg twice daily) for the past one and half years.

On examination, the pulse rate was 86/min, regular, of normal and equal volume in all the four limbs. The blood pressure recorded was 140/85 mm of Hg (supine), temperature 38°C and respiration 26/min. Mild anaemia and a faint malar rash were noticed. Cardiovascular examination

confirmed mitral stenosis. The spleen was not palpable and examination of the other systems revealed no abnormality.

Investigations revealed, haemoglobin 9.8 g/dl (normochromic-normocytic anaemia), WBC count 3800/mm³ N62 L28 M4 E6, ESR 106 mm/hr; platelet count was 1.8 lac/mm³; malarial parasite was not found. Chest X-ray showed small bilateral pleural effusions. ECG was inconclusive; 2D ECHO demonstrated mitral stenosis without any involvement of pericardium. Serum bilirubin, BUN, serum creatinine and blood sugar (fasting) were 0.8 mg/dl, 36 mg/dl, 1.1 mg/dl and 108 mg/dl, respectively. Urine examination was within normal limits. Widal test, Mantoux test, ELISA tests for *M. tuberculosis* and HIV were negative. Thyroid function tests were normal. Pleural fluid was exudative with lymphocytic predominance and showed no evidence of malignancy; radioisometric blood culture (Bactec test) for *M. tuberculosis* was negative. Though a male subject of 58 years, question of collagen vascular disease can not be ruled out, and total collagen profile of the patient was done. The results were: antinuclear factor (ANF) positive 1:640, rheumatoid factor positive 1:320 and positive antihistone antibodies; other autoantibody tests were negative.

A diagnosis of amiodarone-induced lupus was considered. Amiodarone was stopped, and the patient started improving without any specific treatment. After 10 months of discontinuation of amiodarone, the patient was totally free of symptoms without any clinical or radiological features of lupus. At one and half years, ESR was 20 mm/hour and ANF 1:40. The patient is now on digitalis, triamterene, benzthiazide, and is totally symptom-free.

DISCUSSION

In the West, drug-induced lupus may be responsible for 3-7% of all patients of SLE.³ It is uncommon in the Indian context. Though the clinical presentation of SLE and DIL are similar in most of the cases, there are certain characteristic distinguishing features between them. The features in favour of DIL are²:

Assistant Professor, Department of Medicine, Burdwan Medical College, Burdwan, West Bengal.
Received : 7.5.2001; Accepted : 21.5.2002

1. Male and female prevalence is equal.
2. Patients are usually older.
3. The common presenting features are fever, malaise, arthralgia with or without arthritis, and is usually of milder in degree.
4. Dermatological, renal and central nervous system involvement is rare.
5. ANF is positive, anti-dsDNA and anti-Sm antibodies are negative, serum complement level usually remains normal but antihistone antibodies are positive in majority of cases.

Amiodarone-induced side-effects range from 40-93%. The usual side effects are nausea and vomiting, hepatitis, alveolitis, pulmonary fibrosis, microdeposits in cornea, bluish skin, photosensitivity, peripheral neuropathy, bradycardia, QT-prolongation and thyroid function abnormalities.³ Few of the side effects are immunologically-mediated; patients on amiodarone may have positive ANF, circulating immune complexes, and elevated ESR and eosinophil count.

According to 1982 American Rheumatism Association

revised criteria for the classification of SLE,⁴ the patient satisfied four criteria - malar rash, serositis, haematological disorders (leucopenia with lymphopenia), and positive antinuclear antibodies. Low titres of ANF may be found in elderly people, however spontaneous (idiopathic) SLE in an elderly person, particularly in a male subject is quite uncommon and DIL should always be kept in mind.

REFERENCES

1. Hahn BH. Systemic lupus erythematosus. In: Isselbacher KJ, Braunwald E, Wilson JD, Martin JB, Fauci AS, Kasper DL (Ed), Harrison's Principles of Internal Medicine, 13th edition, Mc-Graw-Hill, New York. 1994;2:1643-8.
2. Susano R, Caminal L, Ramos D, et al. Amiodarone-induced lupus. *Ann Rheum Dis* 1999;58:655-6.
3. Raeder EA, Podrid PJ, Lown B. Side effects and complications of amiodarone therapy. *Am Heart J* 1985;109:975-83.
4. Tan EM, Cohen AS, Fries JF, et al. The 1982 revised criteria for the classification of systemic lupus erythematosus. *Arthritis Rheum* 1982;25:1271-7.
5. Sheikh Zadeh A, Schafer U, Schnabel A. Drug induced help us by Aminodarone. *Arch Intern Med* 2002;162(7):1834-6.

Browse

API Website

www.apiindia.org