

Case Report

REVERSAL OF VPC AND TISSUE IRON DEFICIENCY-A PROBABLE HYPOTHESIS OF LINKAGE

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ABSTRACT

Iron deficiency is one of the most common nutritional deficiencies in the world. Iron deficiency not only manifests in the form of anaemia but also affects other important organs as well like actin myosin movement, myocardium, peripheral nerves, jejunum, neuronal synapses in brain, liver, kidney, skeletal and smooth muscles, immune system, hair, skin etc owing to its role in myriad ways like haeme and non-haeme iron dependent proteins. This justifies the broad concept of IRON DEFICIENCY SYNDROME (IDS), a term which should replace the conventional but restricted term Iron Deficiency Anaemia (IDA).

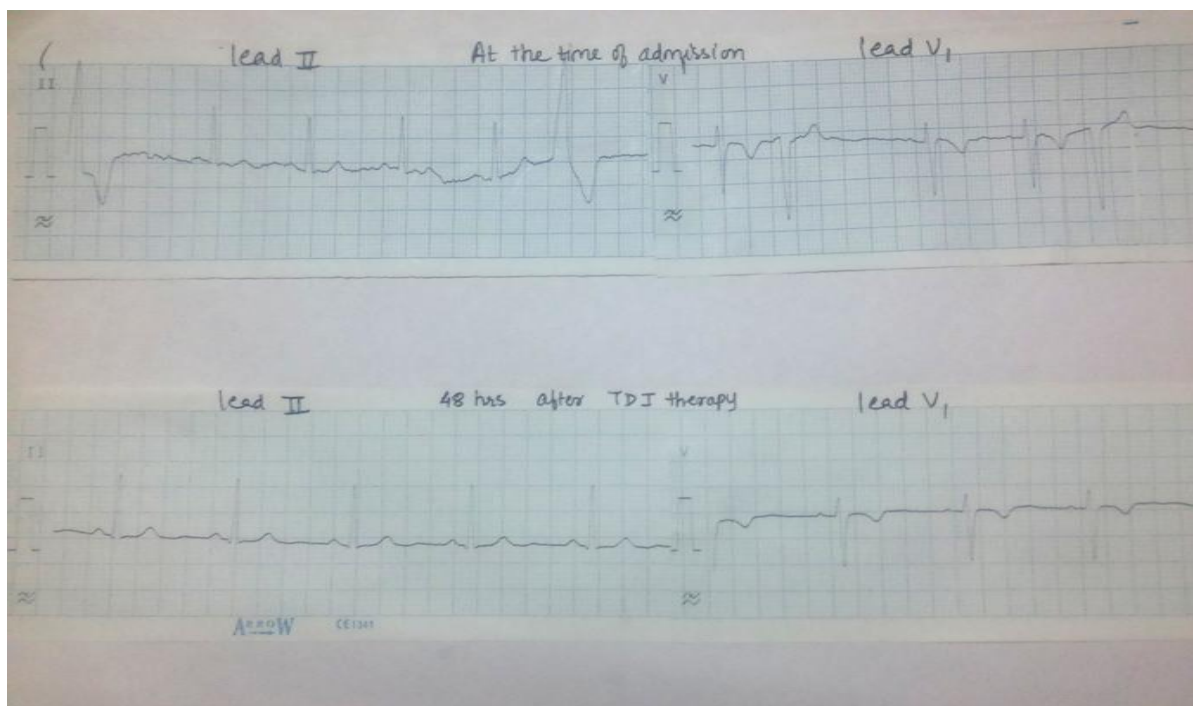
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INTRODUCTION

This study suggests that with correction of tissue iron deficiency in the form of Total Dose Iron (TDI) infusion, patient with chronic Ventricular Premature Contraction (VPC) and symptoms with no other cardiac sign and symptoms improve dramatically. This could be possible because of the essential role of iron dependent proteins in synapses and thereby cell function.

CASES

A 38 year old female patient had been suffering from giddiness, palpitations, easy fatigability, muscle cramps since 3 months for which she had taken oral iron, oral multivitamin tablets for 2 months and Tab Diltiazem (60mg) twice a day and Tab.



Case Report

Amiodarone (200mg) twice daily for 15 days each as her ECG showed multiple VPCs. In spite of this, patient was not improving and she was admitted in our institution.

On regular work up, it was found that her vitals and systemic examination was within normal limits. Patient was anaemic and didn't have any valvular heart disease and was not in cardiac failure. Her Hb was 8.7g/dl, MCV-77.7fL, MCHC- 29.7pg, total count and platelet count was within normal limits. Her PS showed microcytic hypochromic RBCs with anisocytosis. S.Ferritin was 7.49ng/dl and ECG showed multiple VPCs and T wave inversion.

We treated her with total dose-1200mg of Iron Sucrose (included 500mg for tissue stores) i.v after a negative test dose. We had explained about anaphylactic reactions but no side effects were found. TDI was given as 200mg per day for 6 days and an ECG was repeated after 48 hours of completion of TDI. Her new ECG with long lead II and V1 revealed that VPC were completely reverted as shown below and patient had symptomatically improved. Her previous complaints of giddiness, palpitation, muscle cramps, easy fatigability were completely relieved.

DISCUSSION

Our body requires elements like iron for proper functioning at cellular levels. TDI improves cell functioning very effectively and rapidly. This patient had absolute iron deficiency with VPCs. This case report suggests another probable association of iron deficiency with cardiac physiology.

Conclusion

This study suggests a probable linkage between IDS and one of its myriad manifestations like VPC along with improvement of symptoms and complete reversal of VPC with TDI therapy. Nevertheless this study requires a large scale confirmation.

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