

CASE REPORT

I/V Regular Insulin Use to Augment Cocaine Effect by Drug Abuser: New Dangerous Face of Substance Abuse

Vishal R. Tandon, Nancy Khajuria, Sana Bashir, Amarjeet Singh

Abstract

We hereby report a first case of substance abuse, where regular insulin by intravenous route has been misused to augment the cocaine abuse to derive sedation, euphoria, and a state of semi-consciousness leading to medication error in the form of extensive thrombophlebitis/cellulitis necrotising fasciitis. The said case report is important to create awareness among the drug regulatory authorities regarding this new face of substance abuse, which can prove potentially fatal among abusers warranting necessary regulatory action.

Key Words

Regular Insulin, Cocaine Abuse, Substance Abuse, Medication Error

Introduction

The regular insulin though comes under the category of essential drugs and is life-saving drug and it is being used since time for the effective management of insulin dependent diabetes mellitus as well as is the drug of choice in diabetic ketoacidosis.

Although misuse, of regular insulin has been reported among sport personnel for body building purposes [1,2] and even one cases exist in the literature where severe hypoglycaemia has been reported due to regular insulin use among sport personal. [3]

We hereby report a first case of substance abuse, where regular insulin by intravenous route has been misused to augment the cocaine abuse to derive sedation, euphoria, and a state of semi-consciousness leading to medication error in the form of extensive thrombophlebitis/cellulitis necrotising fasciitis without realising the fatality potential and severe life threatening hypoglycaemic potential of such abuse among the young drug abuser. The said case report is important to create awareness among the drug regulatory authorities regarding this new face of substance abuse, which can prove potentially fatal among

abusers warranting necessary regulatory action.

Case Report

A 29 years old male with known history of multiple substance abuse which includes alcohol and Cocaine since more than 3 years presented with complaints of pain, swelling with clear signs of thrombophlebitis, necrotising fasciitis on the right hand. On history, it was revealed that he belongs to poor family and is unemployed and was on multiple substance abuse particularly cocaine since last three years. However, due to financial constraints, he started experiencing withdrawal symptoms on non availability of cocaine.

To overcome the said problem, he learnt from the peers that the minimal dose of cocaine can be augmented for its effect by I/V regular insulin intake. Three days before presenting to the hospital, he self- tried to administer regular I/V insulin on the dorsal aspect of right hand on the advice of his peer drug abuser but failed in its action leading to extravasation of the insulin into the subcutaneous tissues and surrounding veins leading to thrombophlebitis, pain, swelling and subsequently necrotising fasciitis. On local examination, there was a

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Cite this article as: Tandon VR, Khajuria N, Bashir S, Singh A. IV regular insulin use to augment cocaine effect by drug abuser: New dangerous face of substance abuse. JK Science 2023;25(2): 131-132

ADRM Centre Department of Pharmacology Govt Medical College, Jammu

Correspondence to: Dr. Vishal R Tandon, Profesor and Incharge ADRM Centre Department of Pharmacology Govt Medical College, Jammu

Manuscript Received: 06.05.2022; **Revision Accepted:** 06.08.2022;

Published Online First: 10 April 2023

Open Access at: <https://journal.jkscience.org>



Fig.1 Showing Extensive Thrombophlebitis/Cellulitis after IV Regular Insulin Misuse for Cocaine Augmentation by Drug Abuser

wound which was tender, indurated and filled with pus and slough. Also the patient was unable to move and perform any activity by hand. The surgical consultation was sought and analgesics, anti inflammatory and injectable antibiotics were started for the treatment.

Interestingly, on being enquired on the experience of said augmentation, patient reported that with the minimal dose of cocaine with I/V regular insulin, the person experiences a state of semi-consciousness, drowsiness, sedation and euphoria for a much longer time and at the same time saves the cost of procuring cocaine.

No re-challenge /De-challenge could be done because of ethical contraindication and hence the mechanism and type of ADR cannot be commented upon. Furthermore, the appearance of ADR could not be explained by any concurrent disease, drug or chemical. Adverse drug reaction (ADR) was probable as assessed by WHO uppsala monitoring the centre causality scale and Naranjo's score .^[4,5]

Severity of the reaction as assessed using Hartwig ADR severity assessment scale classified the said ADR as severe level 2.^[6] Preventability assessment was done by using Schumock and Thornton scale which classified the ADRs as Definitely preventable.^[7]

Discussion

Evans PJ *et al* reported a case of insulin abuse by a bodybuilder before a competition to help increase his

muscle bulk resulting into potentially life threatening hypoglycaemia.^[1]

Heidet M *et al* reported a case of an insulin abuse by a male body builder to augment ability to quickly gain muscle mass .^[2]

Kaminer Y *et al* in their review suggested misuse of insulin in diabetic patient with psychiatric problems to the time have reported to be misused for failed suicide attempts.^[3]

While reviewing the literature, it is observed that misuse of insulin has been largely reported among sport personnel and rarely among the psychiatric patients as well.^[3]

However, we failed to cite any literature where in, the insulin has been misused for augmentation of cocaine abuse. Hence, the said case is first of kind to be reported. with a new facet of drug abuse/substance abuse.

Further it carries a serious life threatening potential among the misusers as it can cause fatal hypoglycaemia.

It is very important for the drug regulatory authorities to make a note of new form of misuse/abuse with regular insulin warranting a restriction on over the counter availability of insulin syringes and regular insulin until unless it has been prescribed by physician.

Conclusion

It is a first case of substance abuse, where regular insulin by intravenous route has been misused to augment the cocaine abuse warranting an urgent attention of drug regulatory authorities regarding this new face of substance abuse, which can prove potentially fatal among abusers and thus demanding immediate regulatory action on this account.

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