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(CASE REPORT)

Adverse reactions of herbal drug: a case report of hepatitis, oral mucositis, and lichenoid reactions

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Abstract

Herbal medicine products are widely used as a popular therapeutic option worldwide. However, it is unfounded to assume that they are entirely free from side effects. In this particular case report, we are discussing a 40-year-old male patient who was diagnosed with herbal drug-induced hepatitis and oral mucositis, along with lichenoid reactions secondary to drug reaction. The patient was advised to take oral steroids and moisturizing cream. Initially, the patient was admitted under the Department of ENT and was later transferred to the Department of Medicine due to severe thrombocytopenia. Necessary investigations were conducted, which revealed leukocytopenia, thrombocytopenia, and deranged LFT. Two pints of RDP were transfused to address the thrombocytopenia, and the platelet count gradually improved. Subsequently, the patient was shifted to the general ward. Repeated LFT results returned to normal, and the patient was discharged. By reporting such cases, healthcare professionals and the public become more aware of the potential risks associated with herbal drugs. This facilitates the identification of adverse effects, thereby aiding in the prevention of additional harm to patients.

Keywords: Herbal Medicine; Oral Mucositis; Thrombocytopenia; Leukocytopenia

1. Introduction

The utilization of herbal products as medicinal remedies dates back thousands of years, and in recent times, there has been a notable surge in their usage, particularly for purposes like bodybuilding, weight loss, and maintaining overall well-being. This increased adoption is driven by a common belief among the general public that since these products are natural, they are inherently safe. However, this belief is often incorrect and misguided, as herbal products have been known to cause serious adverse effects. One frequently reported consequence is liver damage, occasionally reaching such severity that it requires transplantation or results in fatality.

Numerous systemic elements are recognized to play a role in oral diseases or conditions, and one of these factors is drug consumption. The underlying mechanisms responsible for oral adverse reactions linked to drug intake remain poorly understood, and the overall occurrence is unclear. Nevertheless, they are presumed to be quite prevalent, even though healthcare professionals often consider medication-induced oral reactions as insignificant grievances. Distinguishing between lichenoid drug reaction and oral lichen planus can be challenging due to their clinical similarities. The commonly acknowledged standards for distinguishing between the two conditions entail monitoring the amelioration or vanishing of lesions upon ceasing the medication, accompanied by their reappearance upon resuming the medication.

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Further investigation is necessary to clarify and establish the clinical importance of connections between botanicals and medications. It is vital for healthcare practitioners, individuals, governing bodies, and suppliers of herbal remedies to possess knowledge regarding potential untoward drug reactions (ADRs) and drug interferences that could emerge from the utilization of herbal medicines, whether autonomously or in conjunction with traditional medications.

2. Case report

A 40-year-old male presented to casualty with a history of burning sensation and pain in the mouth for the previous 10 days. The symptoms had an insidious onset and gradually progressed over time. The pain was throbbing in nature and worsened upon consuming food, liquids, and solids. There was a history of experiencing painful swallowing for solids and liquids, and the patient had been unable to swallow for the past 8 days. There was no previous history of similar complaints. There was no history of foreign body sensation or voice change. There was a history of consuming an Ayurvedic testosterone booster for the previous 20 days. The patient had a history of cigarette smoking (1 per day * 3 years) and beetle nut chewing (since 13 years). During admission to the hospital, there were multiple lesions observed on the lower lip and teeth, showing signs of tobacco staining. Multiple ulcerations were observed on the buccal mucosa, accompanied by the presence of whitish bands. The anterior two-thirds of the tongue exhibited inflammation, while the soft palate showed whitish bands. The patient also had a history of aphasia for the past 2 days and oral ulcers for the past 4 days. The patient was handicapped and had a polio attack since childhood. Initially the patient was under the department of ENT and was taken over to medicine in view of severe thrombocytopenia . The patient was advised to discontinue the consumption of the herbal drug since it was suspected to be the underlying cause of hepatitis, oral mucositis, and lichenoid reactions .The necessary investigations were done which showed leucocytopenia, thrombocytopenia and deranged LFT.

Laboratory investigations: Hb: 16g/dl, TLC: 2550/mm , PLT: 0.45 , PS: Normocytic, normochromic blood picture with leucopenia and thrombocytopenia, indirect bilirubin:1.87mg/dl, globulin: 2.8g/dl, total bilirubin:4mg/dl, direct bilirubin: 2.1mg/dl, AST:54.0U/L, ALT:277.4U/L, ALP: 182.1U/L

The patient underwent a nasal endoscopic assessment, which showed DNS to right, presence of fungal changes noted over the mucosa of the posterior pharyngeal wall, vocal folds, AE folds, and vallecula. (figure1)After being admitted to the hospital, the patient was administered with Tab.liveril forte(Silymarin Extract with N-Acetyl L-Cysteine, Choline L-Carnitine and L-Glutathione) 1-1-1, Tab Udiliv (Ursodeoxycholic Acid)150mg 1-0-1,Syp.mucaine gel (Oxetacaine + Aluminium Hydroxide + Milk Of Magnesia)10 ml p/o 1-0-1,Inj.MVI IN (Vitamin A + Thiamine(Vitamin B1) + Vitamin B2 + Vitamin D3 + Pantothenic Acid)500 ml NS 0-1-0,Inj.Combitum (Ceftazidime + Tazobactum), 125G IV 1-0-1,Inj.Forcan (Fluconazole)200mg IV 1-0-1, 2 pint RDP was transfused in view of thrombocytopenia.the platelet count gradually increased and on administration with liver protective drugs , the patient was symptomatically improved and was shifted to general ward. Repeated LFT came to be normal and the patient was discharged with the following advice.

Tab.liveril forte(Silymarin Extract with N-Acetyl L-Cysteine, Choline L-Carnitine and L-Glutathione) 1-1-1, Tab Udiliv (Ursodeoxycholic Acid)150mg 1-0-1,Syp.mucaine gel(Oxetacaine + Aluminium Hydroxide + Milk Of Magnesia)10ml p/o 1-0-1,Lexanox plus gel L/A (Amlexanox +Lidocaine) 1-0-1, Tab. Dolo(Acetaminophen) 650mg SOS. The patient was instructed to have a follow-up appointment in the General Medicine OPD after 15 days of discharge.

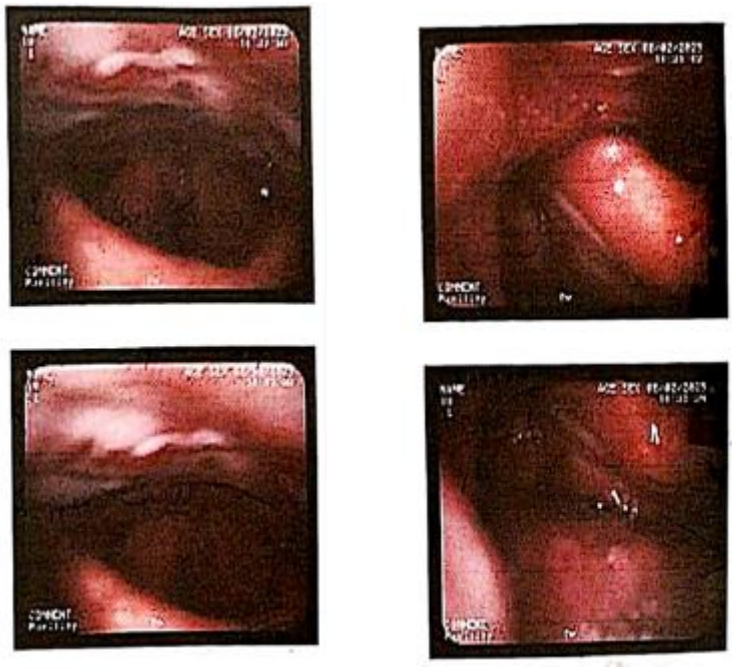

Figure 1 Nose and nasopharynx: DNS to right.Fungal changes noted over mucosa to posterior pharyngeal wall , vocal folds, AE folds and vallecula .

3. Discussion

Many herbal medicines possess the capacity to induce liver damage, often leading to cholestatic hepatic injury, with young males being the usual victims. The Drug-Induced Liver Injury Network study has identified performance-enhancing agents as the primary culprits in such cases. These supplements often contain steroids, which are widely recognized for their potential to harm the liver[1]. In this case, the patient was taking an Ayurvedic testosterone booster, which was suspected to be the cause of hepatitis and oral mucositis. The patient was advised to discontinue the Ayurvedic drug in order to prevent further deterioration of the condition. The patient's medical history was needed to be examined and carefully reviewed, paying attention to any signs of underlying systemic diseases and current medication usage within specific timeframes. This evaluation was important to determine if these factors could be ruled out as potential causes for the patient's condition.

The majority of herbal products available in the market lacks the approval of the US Food and Drug Administration (FDA) and is not regulated in terms of their purity and potency. As a result, there is a potential risk of these products containing toxic substances or other contaminants, which could potentially lead to adverse effects. Therefore, it is crucial to implement stringent scientific methodologies and conduct clinical trials in order to guarantee the quality and consistency of herbal products[2].

The actual frequency of herbal product usage and the occurrence of herbal hepatotoxicity remain uncertain. Unlike modern prescription drugs, the existing regulations for herbal products do not require systematic monitoring or mandatory reporting of adverse events to the FDA by manufacturers. As a result, information on herbal hepatotoxicity primarily relies on anecdotal case reports, case series, and retrospective databases[3].Additional research is required to elucidate and establish the clinical significance of interactions between herbs and drugs. It is crucial for healthcare professionals, patients, regulatory authorities, and herbal medicine suppliers to be aware of potential adverse drug reactions (ADRs) and drug interactions that may arise from the use of herbal medicines either independently or in combination with conventional drugs[2].

Abbreviations

- ENT : Ear Nose Throat
- LFT: Liver Function Test
- RDP: Random Donor Platelet
- Hb: Hemoglobin
- TLC: Total Leukocyte Count

- PLT: platelet count
- PS: Peripheral Smear
- AST: Aspartate Aminotransferase
- ALT: Alanine Aminotransferase
- ALP: Alkaline Phosphatase
- DILI: Drug-induced Liver Injury
- FDA: Food and Drug Administration

4. Conclusion

Herbal medicinal products enjoy widespread popularity as a favored therapeutic choice across the globe. Nonetheless, it is baseless to presume that they are completely devoid of adverse effects. This report demonstrates that the patient, who had been receiving herbal drug administration, was diagnosed with herbal drug-induced hepatitis, oral mucositis, and lichenoid reactions. The management of these conditions commenced with identifying the culprit drug and discontinuing its use. Various herbal medicinal products are linked to a range of hepatotoxicity events. Progress in comprehending the underlying mechanisms and associated risks is essential to enhance the safety of herbal medicine.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

There are no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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