

Herbal Teas and Thrombocytopenia: A Curious Case of Yellow Dock and Burdock-Induced Thrombocytopenia

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INTRODUCTION

- Immune thrombocytopenia (ITP) is a bleeding disorder characterized by low platelet count < 100K/ μ l; an immune-mediated condition, with formation of antibodies against a structural platelet antigen.
- A few cases with an incidental association with herbal medications have been reported, but this causality has not been studied in detail.
- We describe a case of ITP after consumption of herbal tea containing *Rumex crispus* (yellow dock) and *Arctium lappa* (burdock).

CASE PRESENTATION

- A 41-year-old obese African-American woman with no past medical history who was sent to the ED after her primary doctor noted a platelet count of 5 K/ μ l. The patient had been in her usual state of health 10 days prior to presentation when she consumed a ‘cleansing herbal tea’ bought online. It contained the herbs yellow dock and burdock. 2-3 days later she noticed some skin changes which she described as red marks on her arms followed by similar marks on her legs and chest (petechiae).
- The patient denied smoking, alcohol intake, illicit drug use, any manifest bleeding from mucosal surfaces or gingivae, shortness of breath, generalized malaise, unprotected sex, any new medications, recent travel or any new lumps on her body.

CASE PRESENTATION

- Initial platelet count was 5K/ μ l and WBC was 2.5K/ μ l.
- A urine drug screen, HIV, hepatitis panel, anti-C3d and COVID-19 were all negative. Bilirubin and liver function tests were normal. Peripheral smear showed large platelets but no schistocytes. ANA was negative
- The patient was given 1 unit of platelets which improved the count to 49 K/ μ l and was started on 40 mg of dexamethasone. On day 3, the platelet count had improved to 143 K/ μ l, and WBC count to 7.2 K/ μ l. She was followed up at our cancer centre after discharge & remained asymptomatic.



DISCUSSION

Although drug-induced thrombocytopenia is a well-known entity, thrombocytopenia associated with dietary supplements and herbal remedies, other than that associated with quinine-containing substances, has not been well documented in the literature.

DISCUSSION

- *Arctium lappa*, commonly known as burdock, is a plant native to Japan. It is used in Chinese medicine as a blood purifier. *R. crispus*, commonly known as yellow dock, is a herb of the Polygonaceae family. No clear indication has been identified for its use, but it is believed to have anti-bacterial, anti-oxidant, anti-inflammatory and diuretic properties. The only known side effects are contact dermatitis when applied topically.
- Our patient's platelet count improved after a course of glucocorticoids and the discontinuation of suspected agents. As per our literature review, no cases of immune thrombocytopenia caused by burdock and yellow dock have been previously published.

CONCLUSIONS

- Herbal medications are commonly used worldwide, yet the adverse effects are under-reported or under-recognized.
- Healthcare professionals should enquire about the use of these substances during patient interview and consider them in the differential diagnosis when appropriate.

REFERENCES

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