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Integrative Naturopathic Management of Alcohol-Induced Thrombocytopenia: A Case Report

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ABSTRACT

A 40-year-old male presented with thrombocytopenia and chronic alcoholism at Alva's Anandamaya Arogydhama. The patient had a platelet count of 68,000 cells/mcL, accompanied by general weakness, disturbed sleep, and a long history of alcohol and tobacco use. Upon admission, he discontinued alcohol and tobacco and underwent a 14-day naturopathic inpatient program. Treatment included foot reflexology, hot foot immersion baths, massages, and dietary adjustments emphasizing raw juices, nuts, vegetables, and excluding processed foods, refined sugars, and alcohol. Additionally, daily yoga and pranayama were incorporated. Following the intervention, the patient's platelet count improved to 160,000 cells/mcL, with reductions in cholesterol, triglycerides, liver enzymes, fasting blood sugar, weight, and BMI. This case demonstrates the effectiveness of an integrated naturopathic approach for thrombocytopenia and highlights the potential benefits of lifestyle modification and detoxification in patients with chronic alcohol use. Findings suggest that comprehensive naturopathic care may support sustainable health improvements in similar cases.

Key words: *Alcoholism, naturopathy, platelet count, thrombocytopenia, treatment outcome, wellness*

INTRODUCTION

Thrombocytopenia, a condition marked by a platelet count lower than the normal range of 150,000 to 400,000 cells per microliter, can lead to severe complications, including internal bleeding, when unmanaged.[1] Chronic alcoholism is a known contributing factor,[2] as prolonged alcohol use can damage bone marrow, impairing blood cell production, including platelets.[3] However, cases of thrombocytopenia associated with both chronic alcoholism and successful recovery through naturopathic treatment are rare. Studies on alcohol-induced thrombocytopenia are limited, with most cases primarily managed through conventional medicine, rather than holistic, naturopathic approaches.

This case is unique because it involves a middle-aged male with a 10-year history of alcohol and tobacco use, presenting with critically low platelets (68,000 cells/mcL). The case illustrates a comprehensive, integrative approach to treating thrombocytopenia with naturopathic methods, including foot reflexology, massage therapies, dietary adjustments, and lifestyle

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modifications, without pharmacological interventions. Such approaches are rarely documented, particularly in terms of their impact on platelet recovery and overall metabolic health. This report adds to the limited literature on alternative methods for managing alcohol-induced thrombocytopenia and highlights the potential for sustainable recovery through lifestyle changes and natural therapies.

Case History

The patient, a 40-year-old unmarried male, presented to Alva's Anandamaya Arogydhama with a diagnosis of thrombocytopenia. His condition was first identified on July 20, 2022, when he was found to have a critically low platelet count of 68,000 cells per microliter. The patient reported symptoms of generalized weakness and disturbed sleep, which had persisted for five months. His medical history revealed chronic alcoholism and a 10-year smoking habit, both of which significantly impacted his health and contributed to his thrombocytopenia.

There was no significant family history of thrombocytopenia, blood disorders, or chronic conditions like diabetes or hypertension. However, the patient had a history of heavy alcohol consumption, which is known to suppress bone marrow function and lower platelet counts. Smoking was also a factor, contributing to oxidative stress and potentially worsening platelet decline.

Environmental factors were noted as well. The patient reported limited physical activity, a high-stress lifestyle, and a diet lacking in fresh fruits, vegetables, and whole foods, all of which may have compounded his condition. Upon admission on July 22, 2022, he was placed on a strict inpatient program where he ceased alcohol and tobacco use.

A naturopathic treatment protocol, including dietary changes, therapeutic massages, foot reflexology, and yoga, was initiated to address his physical, mental, and metabolic health needs. The approach aimed to support his platelet recovery, address metabolic imbalances, and provide a sustainable framework for lifestyle modification.

Intervention

Table 1: Treatment protocol during the stay in Alva's Anandamaya Arogydhama

Date	Morning Treatment	Afternoon Treatment	Night Treatment
23/07/2022	Foot reflexology[4] Hot foot immersion bath[5]	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
24/07/2022	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
25/07/2022	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
26/07/2022	Foot massage[6] Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
27/07/2022	Foot massage Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
28/07/2022	Foot massage Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath

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29/07/2022	Foot massage Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
30/07/2022	Partial massage to hands and legs[7]	Foot reflexology Hot foot immersion bath	Foot reflexology Hot foot immersion bath
31/07/2022	Foot reflexology Hot foot immersion bath	No treatment	Foot reflexology Hot foot immersion bath
1/08/2022	Foot massage Foot reflexology	Neutral underwater massage[8]	Foot reflexology
	Hot foot immersion bath		Hot foot immersion bath
2/08/2022	Abdominal pack[9] Eye pack[10] SSPS (*Shashtika Shali Pinda Sweda*)[11]	Abdominal pack Eye pack Neutral spinal spray[12]	Foot reflexology Hot foot immersion bath
3/08/2022	Abdominal pack Eye pack Full body massage[13]	Abdominal pack Eye pack Neutral underwater massage	Foot reflexology Hot foot immersion bath
4/08/2022	Abdominal pack Eye pack Salt glow massage[14]	No treatment	No treatment

Table 2: Dietetic regimen followed for 13 days

Days	7:00 Am	9:00 Am	10:30 Am	12:00 Pm	2:30 Pm	4:00 Pm	5:00 Pm	7:00 Pm	9:00 Pm
01	*Tulasi Kashaya*[15]	Ragi ganji + little jaggery[18] + papaya[19]	Chia seeds[20] + honey	Boiled diet + buttermilk[21]	Tender coconut water[22]	Dry fruits[26] with pomegranate[27]	Kiwi fruit[28]	2 chapatis[21] + soup (29) + fruits[30]	Apple[31]
02	*Tulasi Kashaya*	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Tender coconut water	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	Banana[32]
03	Beetroot juice[16]	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Tender coconut water	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	Papaya[33]
04	*Tulasi Kashaya*	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Tender coconut water	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	apple
05	Lemon honey juice[17]	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Tender coconut water	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	banana

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06	Beetroot juice	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Barley water[23]	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	papaya
07	Tulasi Kashaya	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Carrot juice[24]	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	apple
08	Lemon Honey juice	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Ash gourd juice[25]	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	banana
09	Beetroot juice	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Tender coconut water	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	papaya
10	Tulasi Kashaya	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Barley water	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	apple
11	Lemon honey juice	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Carrot juice	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	banana
12	Beetroot juice	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk	Ash gourd juice	Dry fruits with pomegranate	Kiwi fruit	2 chapatis + soup + fruits	papaya
13	Tulasi Kashaya	Ragi ganji + little jaggery	Chia seeds + honey	Boiled diet + buttermilk					

Table 3: Patients pre and post reports.

Parameters	Pre - reports	Post - reports
Platelet count	68,000cells/cumm (20/07/2022)	84,000cells/cumm (24/07/2022) 1,20,000cells/cumm (31/07/2022) 1,60,000cells/cumm (03/08/2022)
Asparate aminotransferase (SGOT/AST)	97.0 IU/L (20/07/2022)	56 IU/L (03/08/2022)
Alanine aminotransferase (SGPT/ALT)	60.0 IU/L (20/07/2022)	31 IU/L (03/08/2022)
Total cholesterol	249.0 mg/dL (20/07/2022)	203 mg/dL (03/08/2022)
Triglycerides	266.0 mg/dL (20/07/2022)	150 mg/dL (03/08/2022)
LDL Cholesterol - Direct	150.0 mg/dL (20/07/2022)	135 mg/dL (03/08/2022)
HDL Cholesterol - Direct	45.0 mg/dL (20/07/2022)	38 mg/dL (03/08/2022)
VLDL Cholesterol	53.2 mg/dL (20/07/2022)	30 mg/dL (03/08/2022)
TC/HDL	5.5 (20/07/2022)	5.3 (03/08/2022)
LDL/HDL	3.3 (20/07/2022)	3.5 (03/08/2022)

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Fasting blood sugar	128.0 mg/dL (20/07/2022)	98 mg/dL (03/08/2022)
General parameters		
Weight (kg)	85.2 (20/07/2022)	80.3 (03/08/2022)
BMI (kg/m2)	26.3 (20/07/2022)	24.8 (03/08/2022)

Discussion

This case demonstrates the effective use of an integrative naturopathic approach to improve platelet counts and metabolic health in a patient with alcohol-induced thrombocytopenia. The treatment incorporated specific dietary adjustments, physical therapies, and lifestyle changes known to support haematopoiesis and reduce inflammation. Foods high in vitamin A, along with nutrients like pycnogenol, flavonoids, and omega-3 fatty acids, were included to enhance platelet synthesis while reducing aggregation.[34] Components like garlic, curcumin, and nigella sativa, known for their antioxidant and anti-inflammatory properties, were used to protect liver health, which is often compromised by alcoholism.[37]

Physical interventions such as warm water immersion and massage were critical in improving blood flow, reducing stress-induced platelet activation, and promoting metabolic function.[35] Massage therapy, for instance, likely contributed to local platelet increase through enhanced circulation, while yoga and relaxation techniques helped stabilize metabolic parameters by lowering inflammation and improving glucose metabolism.[36] These interventions align with findings that massage and certain plant compounds improve circulation, support metabolism, and assist in weight management by activating brown adipose tissue and reducing fat accumulation.[38,39]

One area for further investigation is the exact role each individual component played in platelet recovery, as they were used simultaneously. This case contrasts with standard treatments, which focus on abstinence alone, by highlighting the broader potential of holistic therapies. The findings support the principle that an integrative approach, combining diet, physical therapy, and lifestyle modification, can effectively manage thrombocytopenia and may offer a replicable model for patients with similar conditions seeking non-pharmacological treatment.

Conclusion

This case report illustrates the potential of an integrative naturopathic approach for managing alcohol-induced thrombocytopenia, highlighting the effectiveness of combining abstinence from alcohol with targeted dietary, lifestyle, and therapeutic interventions. The patient's platelet counts significantly improved from 68,000 to 160,000 cells/mcL within two weeks, alongside notable reductions in cholesterol, triglycerides, liver enzyme levels, fasting blood sugar, weight, and BMI. These results underscore the relevance of naturopathic methods in addressing not only platelet recovery but also overall metabolic health in patients with substance use disorders.

The study is important as it contributes to limited literature on alternative treatments for thrombocytopenia, especially those related to alcohol use, and offers a model that is both sustainable and non-pharmacological. Further research could investigate the specific impact of individual therapies, such as massage or specific dietary nutrients, to better understand their roles in platelet synthesis and systemic detoxification. The findings suggest a promising, holistic pathway that may benefit patients seeking long-term health improvements through lifestyle modification and natural therapies, potentially enhancing recovery protocols in wellness centers and rehabilitation settings.

References

1. Platelets disorders – thrombocytopenia, National heart, lung, and blood institute, march 24 2022, https://www.nhlbi.nih.gov/health/thrombocytopenia
2. Elisabeth A. Tawa, Samuel D. Hall, Falk W. Lohoff, Overview of the Genetics of Alcohol Use Disorder, Alcohol and Alcoholism, Volume 51, Issue 5, September 2016, Pages 507–514,

3. Andrzej Silczuk, Bogusław Habrat, Alcohol-induced thrombocytopenia: Current review, Alcohol, Volume 86, 2020, Pages 9-16,
4. Wang, Wei-Li & Hung, Hao-Yuan & Chen, Ying-Ren & Chen, Kuang-Huei & Yang, szu-nian & Chu, Chi-Ming & Yuan yu, Chan. (2020). Effect of Foot Reflexology Intervention on Depression, Anxiety, and Sleep Quality in Adults: A Meta-Analysis and Metaregression of Randomized Controlled Trials. Evidence-Based Complementary and Alternative Medicine. 2020. 1-21. 10.1155/2020/2654353.
5. Sung EJ, Tochihara Y. Effects of bathing and hot footbath on sleep in winter. Journal of physiological anthropology and applied human science. 2000 Jan 30;19(1):21-7.
6. Kaur J, Kaur S, Bhardwaj N. Effect of 'foot massage and reflexology' on physiological parameters of critically ill patients. Nursing & Midwifery Research Journal. 2012;8(3):223-233.
7. Givi M. Durability of effect of massage therapy on blood pressure. Int J Prev Med. 2013 May;4(5):511-6. PMID: 23930160; PMCID: PMC3733180.
8. Soni K, Shetty P, Sujatha KJ. A comparative study on effects of neutral and cold underwater massage on the physiological parameters of healthy individuals. IOSR-JDMS. 2016;15:32-6.
9. Happ Jr WP, Tuttle WW, Wilson M. The physiologic effects of abdominal cold packs. Research Quarterly. American Association for Health, Physical Education and Recreation. 1949 May 1;20(2):153-69.
10. Sathyanath D. Impact of cold mud pack on abdomen and eyes on the autonomic control of heart rate (Doctoral dissertation, Government Yoga and Naturopathy Medical College, Chennai), 2018.
11. Kalpana et al: Patra Pottali Pinda Sweda And Shashtika Shali Pinda Sweda: A Comprehensive Study Volume 6, Issue 5, May, 2018.
12. Bansal P, Janardan SK, Shetty P. The immediate effect of neutral spinal compress on heart rate variability in hypertensive individuals. Journal of Complementary and Integrative Medicine. 2021 Aug 23.
13. Jane, Sui-Whi, Effects of a full-body massage on pain intensity, anxiety, and physiologic relaxation in Taiwanese patients with metastatic bone pain: A pilot study, University of Washington ProQuest Dissertations Publishing, 2005. 3178148.
14. Prabhakaran B. Evaluate the Effect of Hot Affusion Bath with Epsom Salt on Pain Management in Osteoarthritis of Knee (Doctoral dissertation, Government Yoga and Naturopathy Medical College, Chennai), 2019.
15. Rai VA, Iyer U, Mani UV. Effect of Tulasi (Ocimum sanctum) leaf powder supplementation on blood sugar levels, serum lipids and tissues lipids in diabetic rats. Plant foods for human nutrition. 1997 Jan;50(1):9-16.
16. Bahadoran Z, Mirmiran P, Kabir A, Azizi F, Ghasemi A. The nitrate-independent blood pressure–lowering effect of beetroot juice: A systematic review and meta-analysis. Advances in Nutrition. 2017 Nov;8(6):830-8.
17. Kumar V. The Secret Benefits of Lemon and Honey: Secret Guides. Sterling Publishers Pvt. Ltd; 2007.
18. Sujatha Rajaram, The effect of vegetarian diet, plant foods, and phytochemicals on hemostasis and thrombosis, The American Journal of Clinical Nutrition, Volume 78, Issue 3, September 2003, Pages 552S–558S, https://doi.org/10.1093/ajcn/78.3.552S
19. Lima GP, Vianello F, Corrêa CR, Campos RA, Borguini MG. Polyphenols in fruits and vegetables and its effect on human health. Food and Nutrition sciences. 2014:1065-82.
20. Kulczyński B, Kobus-Cisowska J, Taczanowski M, Kmiecik D, Gramza-Michałowska A. The chemical composition and nutritional value of chia seeds—Current state of knowledge. Nutrients. 2019 May 31;11(6):1242
21. Thomson M, Al-Qattan KK, Bordia T, Ali M. Including garlic in the diet may help lower blood glucose, cholesterol, and triglycerides. The Journal of nutrition. 2006 Mar 1;136(3):800S-2S.
22. Bhagya D, Prema L, Rajamohan T. Therapeutic effects of tender coconut water on oxidative stress in fructose fed insulin resistant hypertensive rats. Asian Pacific journal of tropical medicine. 2012 Apr 1;5(4):270-6.
23. Newman RK, Lewis SE, Newman CW, Boik RJ, Ramage RT. Hypocholesterolemic effect of barley foods on healthy men. Nutrition reports international (USA). 1989.
24. Nicolle C, Cardinault N, Aprikian O, Busserolles J, Grolier P, Rock E, Demigné C, Mazur A, Scalbert A, Amouroux P, Rémésy C. Effect of carrot intake on cholesterol metabolism and on antioxidant status in cholesterol-fed rat. European Journal of Nutrition. 2003 Oct;42(5):254 61.

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25. Selvakumar G, Shathirapathiy G, Jainraj R, Paul PY. Immediate effect of bitter gourd, ash gourd, Knol-khol juices on blood sugar levels of patients with type 2 diabetes mellitus: a pilot study. Journal of traditional and complementary medicine. 2017 Oct 1;7(4):526-31.
26. Samuel DS, Geetha RV. Antioxidant activity of dry fruits: A short review. Research Journal of Pharmacy and Technology. 2014 Nov 1;7(11):10.
27. Stowe CB. The effects of pomegranate juice consumption on blood pressure and cardiovascular health. Complementary Therapies in Clinical Practice. 2011 May 1;17(2):113-5.
28. Lin HH, Tsai PS, Fang SC, Liu JF. Effect of kiwifruit consumption on sleep quality in adults with sleep problems. Asia Pacific journal of clinical nutrition. 2011 Jan;20(2):169-74.
29. Sánchez-Moreno C, Cano MP, de Ancos B, Plaza L, Olmedilla B, Granado F, Martín A. Consumption of high-pressurized vegetable soup increases plasma vitamin C and decreases oxidative stress and inflammatory biomarkers in healthy humans. The Journal of nutrition. 2004 Nov 1;134(11):3021-5.
30. Arshiya S. The antioxidant effect of certain fruits:-A review. Journal of Pharmaceutical Sciences and Research. 2013 Dec 1;5(12):265.
31. Cicero AF, Caliceti C, Fogacci F, Giovannini M, Calabria D, Colletti A, Veronesi M, Roda A, Borghi C. Effect of apple polyphenols on vascular oxidative stress and endothelium function: a translational study. Molecular nutrition & food research. 2017 Nov;61(11):1700373.
32. Vijayakumar S, Presannakumar G, Vijayalakshmi NR. Investigations on the effect of flavonoids from banana, Musa paradisiaca L. on lipid metabolism in rats. Journal of dietary supplements. 2009 Jan 1;6(2):111-23.
33. Addai ZR, Abdullah A, Mutalib SA, Musa KH, Douqan EM. Antioxidant activity and physicochemical properties of mature papaya fruit (Carica papaya L. cv. Eksotika). Advance Journal of Food Science and Technology. 2013;5(7):859-65.
34. McEwen BJ. The influence of diet and nutrients on platelet function. In Seminars in thrombosis and homeostasis 2014 Mar (Vol. 40, No. 02, pp. 214-226). Thieme Medical Publishers.
35. An J, Lee I, Yi Y. The thermal effects of water immersion on health outcomes: an integrative review. International journal of environmental research and public health. 2019 Apr;16(7):1280.
36. Lucia SP, Rickard JF. Effect of Massage on Blood Platelet Production. Proceedings of the Society for Experimental Biology and Medicine. 1933 Oct;31(1):87-90.
37. Li Z, Wu J, Zhao Y, Song J, Wen Y. Natural products and dietary interventions on liver enzymes: an umbrella review and evidence map. Frontiers in Nutrition. 2024 Feb 2; 11:1300860.
38. Shaik Mohamed Sayed UF, Moshawih S, Goh HP, Kifli N, Gupta G, Singh SK, Chellappan DK, Dua K, Hermansyah A, Ser HL, Ming LC. Natural products as novel anti-obesity agents: insights into mechanisms of action and potential for therapeutic management. Frontiers in pharmacology. 2023 Jun 20; 14:1182937.
39. Ravussin Y, Xiao C, Gavrilova O, Reitman ML. Effect of intermittent cold exposure on brown fat activation, obesity, and energy homeostasis in mice. PloS one. 2014 Jan 17;9(1): e85876.

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