Journal of Ayurveda and Integrative Medicine 15 (2024) 100865

Contents lists available at ScienceDirect

Journal of Ayurveda and Integrative Medicine

journal homepage: elsevier.com/locate/jaim

An ayurvedic evaluation & treatment of multiple myeloma: A case report

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ARTICLE INFO

Keywords:
Multiple myeloma
Ayurveda
Integrative medicine
Chemotherapy
Holistic approach

ABSTRACT

This case report discusses the management of multiple myeloma in a 59-year-old male patient through an integrative approach of Ayurvedic and conventional medical care. The patient presented with symptoms of pain in ribs, fatigue, nausea, weight loss, and mental stress. After undergoing chemotherapy and steroid therapy, the patient opted for Ayurvedic treatment instead of a recommended bone marrow transplant. Ayurvedic examination revealed imbalances in *Vata* and *Pitta* doshas, affecting various body tissues and mental state. The Ayurvedic regimen led to the recovery of the patient without adverse effects. This case highlights the role of Ayurvedic medication in managing multiple myeloma, warranting further research and clinical trials for broader validation.

1. Introduction

The global 5-year prevalence of multiple myeloma is estimated to be approximately 160,000 individuals [1]. Plasma cell myeloma, also known as multiple myeloma, is a malignancy characterized by the clonal expansion of abnormal plasma cells within the bone marrow microenvironment. However, it is believed to arise from a combination of genetic alterations, including somatic mutations and chromosomal abnormalities, as well as environmental factors such as exposure to radiation or certain chemicals. The clinical manifestations of plasma cell myeloma are diverse and result from the infiltration of abnormal plasma cells into the bone marrow, leading to bone destruction, burst fracture in vertebrae, hypercalcemia, anemia, renal dysfunction and increased susceptibility to infections. The disease often presents with nonspecific symptoms which can pose challenges in early detection and diagnosis. Diagnostic evaluation of plasma cell myeloma involves a multidisciplinary approach. Laboratory tests including serum protein electrophoresis, immunofixation and quantification of monoclonal proteins are crucial for confirming the diagnosis and assessing disease burden. Bone marrow aspiration and biopsy, coupled with cytogenetic and molecular studies, provide valuable information for risk stratification and treatment planning. Imaging modalities such as skeletal surveys, positron emission tomography (PET) or magnetic resonance imaging (MRI) aid in assessing bone involvement and extramedullary disease. The management of plasma cell myeloma has evolved significantly in recent years with the advent of novel therapeutic agents targeting both the tumor cells and the bone marrow microenvironment. Standard treatment approaches include induction therapy with combinations of proteasome inhibitors, immunomodulatory agents and corticosteroids followed by consolidation therapy and maintenance to prolong remission and improve overall survival. Autologous stem cell transplantation is considered a standard option for eligible patients, offering the potential for deeper and durable responses. Despite advancements in therapy, plasma cell myeloma remains incurable and relapse or progression is almost inevitable. The emergence of resistant clones and the complex interplay between the tumor and the microenvironment contribute to treatment challenges. Comprehensive understanding of its pathophysiology, improved diagnostic tools, and the development of novel therapeutic approaches have revolutionized the management of this complex malignancy. In this case study, a male subject, aged 59 years, was

Peer review under responsibility of Transdisciplinary University, Bangalore.
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https://doi.org/10.1016/j.jaim.2023.100865
Received 24 July 2023; Received in revised form 28 October 2023; Accepted 29 November 2023

confirmed to have been diagnosed with multiple myeloma. Following the diagnosis, the patient initiated Ayurvedic treatment alongside conventional medical care. After a period of one year, the patient demonstrated recovery from multiple myeloma without experiencing any additional adverse effects from Ayurved treatment. This case report suggests the potential effectiveness and safety of Ayurvedic medication in the management of multiple myeloma. However, it is important to note that further rigorous research and clinical trials are needed to establish the efficacy and safety of Ayurvedic treatments for multiple myeloma on a larger scale.

1.1. Patient information

A 59-year-old male patient weighing 64.7 kg, residing in Pune, Maharashtra, India and working as a teacher, sought the consultation of an Ayurvedic physician on September 2, 2021. The Ayurvedic examination of the patient revealed symptoms such as *Parshuka Asthi Shool* (pain in ribs), *Dourbalya* (fatigue), *Hrulasa* (nausea), *Arasdnyata* (ageusia), *Malabaddhata* (constipation), *Chinta* (mental stress), *Bharkshya* (weight loss of 8.5 kg in 3 months), *Urodaha* (burning sensation in the chest) and *Udardaha* (burning sensation in the abdomen). After the onset of symptoms in December 2020, the patient sought medical attention and received chemotherapy and steroid therapy from the oncophysician. The oncophysician advised a bone marrow transplant as a potential treatment option. However, the patient made a personal decision to pursue Ayurvedic treatment instead of proceeding with the recommended bone marrow transplant.

From an Ayurvedic perspective, the patient's body constitution was determined to be *Pittaj-vata*; with *Madhyam sattva* (medium psychic state); The *Agni* (digestive power) was assessed as *Manda* (weak); *Nadi* (pulse) (indicated a *vatapittaj* (vitiation in vata-pitta) state and the tongue appeared coated (*sama*). The gastrointestinal tract (*Koshtha*) was determined to be *krura* (hard); The urine was observed to be as pale yellow, passed 5 to 7 times per day without any burning sensation. Factors contributing to the patient's condition involved imbalances in doshas *Vata* and *Pitta*, disturbances in the body tissues (*Dhatu*), including *Rasa* (Plasma), *Rakta* (blood), *Meda* (fat), *Asthi* (bone), *Majja* (bone marrow).The excretory products (mala) involved were mutra (urine) due to kidney failure and purish (stool) due to constipation; the patient exhibited a state of mental distress (*mana vishanna*). According to Ayurvedic diagnosis, the patient's condition was *Asthimajjagat Vata* [2].

1.2. Family history

No significant medical history

1.3. History of past illness

In July 2021, the patient was diagnosed with COVID-19 pneumonia, confirmed by a high-resolution computed tomography (HRCT) scan with a severity score of 6. Additionally, the patient had a history of hemorrhoids that were surgically treated in 2020.

The patient's daily regimen starts with arising at 6:30 a.m., followed by partaking in activities like morning stroll and shower. Between 8 a.m. and 8:30 a.m., the patient has breakfast options like Paratha, Shira or Upita accompanied by a serving of milk.The patient used to travel a daily distance of 50 km for school teaching activities. Lunch, which was typically consumed between 1 p.m. and 2 p.m., consisted of vegetarian dishes such as chapati, vegetable curry and salads. The patient used to include non-vegetarian meals in his diet three times a week. In the evening, he would have tea and snacks. Dinner was consumed at 8:30 p.m. and a light walk was taken before retiring to bed at 10:30 p.m.

Considering the pathophysiology and prognosis of the disease, following treatment plan was devised: *Deepana* (enhancing digestive fire), *Pachana* (improving digestion) and *Snehana* (oleation therapy). The prescribed majorly used medications included *Panchtikta Ghruta Guggul, Hirak Rasayana, Kukutandatwak Bhasma, Yograj Rasayana, Panchatikta Kshira Basti* (medicated milk enema) and *Mustadi Yapana Basti* (medicated enema).

2. Discussion

The 59 years old male patient diagnosed with multiple myeloma opted for Ayurvedic treatment alongside conventional medical care, taking a holistic approach to address the condition. Multiple myeloma is a rare and complex cancer characterized by abnormal plasma cell growth in the bone marrow, leading to various clinical manifestations and potential complications. To address the condition, the oncophysician prescribed Inj Bortezomib 2 mg subcutaneously and Inj Zoledronic acid 4 mg along with other conventional medicine. These medications were crucial in targeting the abnormal plasma cells and addressing bone-related issues associated with the disease. In July 2021, the patient tested positive for COVID-19, and as a result, his symptoms worsened significantly. The oncophysician recommended a bone marrow transplant as a potential treatment option due to the severity of the symptoms. However, the patient made a personal decision to pursue Ayurvedic treatment instead of proceeding with the recommended bone marrow transplant. This decision reflects the patient's choice to explore alternative approaches to managing his condition and highlights the significance of integrating different therapeutic modalities to meet the patient's unique needs and preferences. Before the initiation of Ayurvedic treatment, The patient's medical condition was evaluated through a bone marrow examination, Based on the findings, the differential diagnosis indicated the presence of either lymphoplasmacytic lymphoma or plasma cell myeloma. Notably, the expression of CD138 and CD20 negativity in plasmacytoid lymphoid cells/plasma cells was observed, which leans towards considering the diagnosis of plasma cell myeloma. The diagnosis and evaluation of multiple myeloma require a multidisciplinary approach involving various laboratory tests, imaging modalities, and bone marrow studies. The patient's diagnostic evaluation involved serum and urine protein electrophoresis, immunofixation, quantification of monoclonal proteins, bone marrow aspiration, hematological parameters (Table 1). This comprehensive evaluation aids in confirming the diagnosis, assessing disease burden, and identifying risk factors for personalized treatment planning.

Multiple myeloma is characterized by significant clinical manifestations, including bone pain, renal dysfunction, and anemia. Rooted in fundamental principles, Ayurveda follows the *Tridosha Siddhanta*, wherein the three vital energies - *Vata, Pitta*, and *Kapha* - play vital roles in maintaining overall well-being [3]. The Ayurvedic texts elaborate on numerous diseases, including *Vatavyadhi,* which arises due to imbalanced *Vata dosha*. *Asthi-Majjagata Vata* is one such condition where vitiated *Vata* accumulates in the bones and bone marrow, manifesting symptoms like bone pain, weight loss, loss of strength, disrupted sleep and continuous mild pain [2]. Multiple myeloma presents with notable clinical manifestations such as bone pain, renal dysfunction and anemia [4]. In this case, the disease is correlated with imbalances in the *Vata* and *Pitta doshas*, characterized by a predominant derangement in *Rakta* (hematological constituents) and *Majja* (myeloid tissue), in conjunction with perturbations in *Rasa* (plasma), *Meda* (adipose) and *Asthi* (osseous) tissues. In Ayurvedic diagnostics, particularly for *Sama* (affected with toxins released from impaired digestion) and *Nirama avastha* (without toxins), the evaluation of excretory products, specifically *mutra* (urine) and *purisha* (stool) holds significance. Urinary analysis serves as a means to ascertain renal function and the presence of anomalous proteins while the analysis of stool can unveil insights into nutrient absorption and gastrointestinal health. This comprehensive approach underscores the vital role of monitoring excretion in assessing the patient's overall health. Furthermore, the patient exhibited a state of mental distress characterized by "*mana: vishanna,*" reflecting the impact of psychological factors on the overall well-being. Based on these findings, the Ayurvedic diagnosis concluded that the patient's condition aligned with

Table 1
Timeline - Disease symptoms, Diagnostics, Treatment & Visit summaries.

Date/Day	Symptoms	Clinical examination and investigations	Treatment	Visit Summary
2 September 2021 Day 1	Costochondral Pain Persistent fatigue Nausea Ageusia Chronic Constipation Psychological distress Weight loss of 8.5 kg in 3 months Chest & Epigastric burning Onset of symptoms from December 2020	Weight: 64.7 Kg Hemoglobin: 7 g/dL Serum creatinine: 3.13 mg/dL Sr Calcium: 8.1 mg/dl Blood urea: 83 mg/dL PET CT: Multiple lytic skeletal lesions show low grade metabolic activity, features are more in favor of Multiple myeloma. Diffuse FDG uptake is noted in marrow of axial and appendicular skeleton (Skull vault, Multiple ribs bilaterally, Lower end of sternum, Few dorsolumbar vertebrae, Sacrum, right iliac bone, Both femurs. Protein Electrophoresis by Immunofixation Kappa free light chain: 2 mg/dl Lambda free Light chain: 154.29 mg/dl beta microglobulin: 7.3 mg/L IgA: 26 mg/dl IgG: 320 mg/dl IgM: 25 mg/dl Immunofixation: Monoclonal band seen in Labda region, Monoclonal band seen in Beta region (1.2 gm/dl) Bone Marrow examination: Hypercellular marrow, diffuse and interstitial increase in plasmacytoid cell/ small plasma cell, these cell expressing Cd 138 & negative for Cd 20, Plasma cell myeloma,	1) *Hirak Rasayana* 125 mg, B.D. 2) Tab *Panchatikta Ghruta Guggul* 250 mg, TDS 3) *Kukutandtwaka Bhasma* 125 mg Morning 4) *Dadimavaleha* 10 ml BD	Received chemotherapy and steroid therapy from an Oncophysician; In July 2021, the patient tested positive for COVID-19. The symptoms of the patient have worsened significantly. Considering the severity of the symptoms, a bone marrow transplant has been recommended as a course of treatment by an Oncophysician. However the patient made a personal decision to pursue Ayurvedic treatment instead of proceeding with the recommended bone marrow transplant.
2 October 2021 1st Month	Mild Costochondral Pain fatigue Mild Nausea Mild Ageusia constipation Mild Psychological distress No Chest & Epigastric burning	Weight: 66.1 Kg BP = 128/80 mmHg	1) Same medicine as above 2) *Makaradhwaja* 75 mg OD	Overall, the patient's symptoms were relatively mild, and they reported feeling good during the visit. Advised investigations.
30 October 2021	Asymptomatic	Weight: 66.4 Kg Hemoglobin: 10 g/dL Serum creatinine - 0.8 mg/dL Blood urea nitrogen - 14 mg/dL Sr Calcium: 8.4 mg/dl Protein Electrophoresis by ImmunofixationKappa free light chain: 2 mg/dl Lambda free Light chain: 17.48 mg/dl beta microglobulin: 1.8 mg/L IgA: 28 mg/dl IgG: 345 mg/dl IgM: 25 mg/dl Immunofixation: No evidence of abnormal bands seen. No Monoclonal band seen. Hypogammaglobulinemia. Bone Marrow examination: normocellular to mildly hypercellular marrow, normal trilineage hematopoiesis, adequate Megakaryocytes, no definite granuloma or fibrosis.	Same medicine as above	The investigation reports of the patient came back with positive results, indicating good health. Renal & Hepatic profile was profile within normal range. The patient was happy and satisfied with the findings. It is important to continue monitoring their health and addressing any concerns that may arise in the future.
20 November 2021 2 nd month	Mild fatigue Flatulence Urticaria	Weight:67.6 Kg BP = 120/80 mmHg	1) *Sutshekhar Rasa* 125 mg bd 2) *Ananta Churna* 2.5 gm bd 3) *Hirak Rasayana* 125 mg bd 4) *Avipattikar Churna* 2.5 gm	During the visit, the patient reported experiencing mild fatigue, flatulence, and urticaria (hives). The patient's fatigue was assessed as mild. Advised lifestyle & dietary recommendations to manage symptoms.
29 November 2021	Symptoms resolved	Weight: 66.6 Kg eGfr = 81.57 ml/mi Sr. Creatinine = 1 mg% Sr Calcium = 8.68 mg%	1) *Hirak Rasayana* 125 mg, B.D. 2) *Panchatikta Ghrut Guggul* 250 mg TDS 3) *Kukutandtwaka Bhasma* Morning 4) *Dadimavaleha* 10 ml BD 5) *Praval Panchamrut* 250 mg BD	During the follow-up visit, it was observed that the patient's symptoms, including urticaria, have resolved. The patient reported no further episodes of hives and expressed relief from the previous discomfort. The healthcare professional commended the patient's efforts and discussed the importance of maintaining a healthy lifestyle, including regular physical activity and a balanced diet. The patient was encouraged to continue monitoring their weight and overall well-being, and a future follow-up was scheduled to ensure ongoing progress.
17 December	Severe fatigue, Fever 100 °F Cough	SpO2 = 76 % Pulse rate- 120 bpm RR = 30/min Blood Pressure = 140/80 mmHg	1) *Panchartana* Decoction 40 ml night	During the visit, it was confirmed that the patient had tested positive for COVID-19 for the second time. The HRCT scan revealed a score of

(*continued on next page*)

Table 1 (*continued*)

Date/Day	Symptoms	Clinical examination and investigations	Treatment	Visit Summary
2021 3rd month	Myalgia Headache, Tastelessness	HRCT severity Score = 16/25 Covid Antigen test: Positive Hemoglobin = 10.9 gm% Sr ferritin = 420.84ng/dl CRP = 87.31mg/dl eGfr = 87.92 ml/min Sr. Calcium = 7.94 mg% Sr. Phosphorus = 2.12 mg% D Dimer = 209 ng/ml	2) *Shrungyadi* Decoction: 40 ml, Morning. 3) *Bilvadi gutika* 250 mg-thrice a day 4) *Sitopaladi Churna* 5 gm Morning & Evening. 5) *Shadangodaka* - Medicated water 6) *Dhupana* (Fumigation): *Dashanga Dhupana* twice a day.	16, indicating significant lung involvement. The patient's serum ferritin level suggests an inflammatory response. The patient presented with several symptoms, including severe fatigue, fever of cough, myalgia, headache, and loss of taste sensation. It was observed that the patient had a SpO2 level of 76 %, which suggested severe Covid 19 infection, and advised oxygen support & hospitalization.
6 January 2022 4th Month	Previous symptoms reduced. Breathlessness Dry Cough	SpO2 = 92 Pulse rate- 92 bpm Blood Pressure = 120/80 mmHg RR = 20/min	Same medicine continued	The patient's previous symptoms have reduced. After a 6-min walk test, the patient experienced mild breathlessness, but all other parameters are within normal ranges.
24 January 2022	Mild Costochondral Pain Mild fatigue Mild Nausea	Weight = 64.7 Kg BP = 120/80 mmHg	1) *Hirak Rasayana* 125 mg, B.D. 2) *Panchatikta Ghrut Guggul* 250 mg TDS 3) *Kukutandtwaka Bhasma* 125 mg Morning 4) *Dadimavaleha* 10 ml BD 5) *Praval Panchamrut* 250 mg BD	During the visit, the patient reported experiencing post-COVID fatigue, mild costochondral pain, mild fatigue, and mild nausea. The symptoms have resurfaced, prompting a revisit to the previous treatment protocol. To monitor the patient's health closely, it was planned to conduct Haemogram, Sr creatinine, and eGFR investigations on a monthly basis. Additionally, it was decided to administer a 7-day *Basti* treatment once every 4 months as part of their management plan.
22 February 2022	Asymptomatic	weight: 66.4 Kg BP = 128/80 mmHg	Same as above *Tiktaka Kshir Basti* 150 Ml (Medicated Enema) for 7 days	Following the established plan, the patient began receiving *Tiktaka Kshir Basti* treatment for 7 days. During the visit, the healthcare professional closely monitored the patient's response to the treatment. Additionally, it was noted that the patient's ongoing healthcare management includes monthly Haemogram, Sr creatinine, and eGFR investigations to keep a close watch on their health status.
16 May 2022	Asymptomatic	Weight = 69.6 Kg BP = 124/80 mmHg	Same as above *Mustadi Yapana Basti* 150 Ml (Medicated Enema) for 7 days	During the visit, the patient reported feeling healthy, asymptomatic, and confident about their overall well-being. Following the positive progress and response to the previous treatment, the patient has now started receiving *Mustadi Yapan Basti* treatment. The patient's response to the *Mustadi Yapan Basti* treatment will be closely monitored.
30 September 2022	Asymptomatic	Weight = 70 Kg Hemoglobin 11.7 gm/dl Sr creatinine = 0.9 mg/dl Sr Calcium = 8.7 mg/dl eGfr = 93.82 ml/min Protein Electrophoresis by ImmunofixationKappa free light chain: 10 mg/dl Lambda free Light chain: 33.4 mg/dl beta microglobulin: 2 mg/L IgA: 42 mg/dl IgG: 356 mg/dl IgM: 25 mg/dl Immunofixation: No evidence of any abnormal bands. No Monoclonal band seen. Hypogammaglobulinemia.	Planning for taper of medications *Tiktaka Kshira Basti* 150 Ml (medicated enema) for 7 days	During the visit, the patient expressed a sense of well-being, reporting feelings of good health and being free from any symptom. He also conveyed confidence in their overall state of well-being. It was encouraging to hear that the patient was experiencing a positive and healthy condition.
30 January 2023	Asymptomatic	Weight = 71 Kg Sr Creatinine = 0.9 mg/dl eGfr = 93.82 ml/min Sr Calcium = 8.5 mg/dl Hemoglobin = 12.2	Previous Medicine Stopped *Rasayana Yoga* 250 mg Morning empty stomach *Mustadi Yapana Basti* 150 Ml (Medicated Enema) for 7 days	Previous Medicine stopped. As preventive aspect it was recommended that the patient undergoes *Basti* therapy once a year, specifically during the *Varsha Ritu* (monsoon season).
2 July 2023	Asymptomatic	Weight = 72 Kg BP = 120/82 mmHg	*Rasayana Yoga* 250 mg Morning empty stomach *Tiktaka Kshira Basti* 150 Ml (Medicated Enema) for 7 days	It was suggested to have a follow-up every six months. This periodic checkup aims to monitor the patient's health status and ensure appropriate medical care and support.
20 October 2023	asymptomatic	Weight = 73 Kg BP = 120/80 mmHg	*Rasayana Yoga* 250 mg Morning empty stomach	The recommendation was to schedule a follow-up after six months.

Asthimajjagat Vata.

Bone marrow is formed from the *Rakta, Meda* and *Majja Dhatus* [5–7]. Therefore, any disturbance in the bone marrow indicates an imbalance in these specific bodily tissues. Additionally during organogenesis, the kidneys are derived from the *Meda* and *Rakta Dhatus* [8], indicating a potential link between the vitiated bone marrow and possible renal function impairment & anemia in this condition. The predominant vitiation of *Vata Dosha* in *Asthi-Majjagata Vata* leads to dryness and porosity in the *Rakta, Meda* and *Majja Dhatu*, disrupting their unctuousness and affecting their overall health and functioning. To address these imbalances, the crucial role of oleation therapy as a primary treatment approach [9]. The inclusion of oleation therapy is directed toward the nourishment and restoration of the perturbed *Dhatus* (body tissues), thereby reinstating their innate equilibrium and vigor.This therapeutic approach not only helps alleviate bone pain and other associated symptoms but also contributes to promoting kidney health and overall well-being. During the course of a COVID-19 viral infection, treatment strategies may need to be adjusted based on the severity of the presenting symptoms. Tailored treatments based on the severity of symptoms were essential for optimizing patient outcomes and ensuring the appropriate allocation of resources and therapeutic interventions [10].

The treatment plan was then tailored to address these imbalances and promote the patient's well-being. The treatment plan includes *Snehana, Swedana* & the administration of *Tikta Kshira basti* & *Mustadi Yapan Basti* [11], a specialized therapy involving a combination of medicated milk & medicated Ghee enema. This therapeutic approach aims to give oleation to body tissues, pacify *Vata dosha* and provide nourishment to the bones & bone marrow. Furthermore, the patient was administered *Yogaraj Rasayana*, a potent herbomineral formulation widely recognized for its beneficial effects on *Rakta* (blood), *Meda* (fat), *Majja* (bone marrow) and mental well-being. To further support bone health and alleviate the condition, the patient was receiving *Kukutanda Twak Bhasma*, a preparation derived from chicken eggshell. The composition of a chicken eggshell typically includes approximately 85 %–95 % calcium carbonate (CaCO3), with around 1.4 % magnesium and several other elements found in trace quantities, this bhasma aids in strengthening the bones. *Hirak Rasayana*, another herbo-mineral formulation, is administered to improve bone density and support overall bone health. In our clinical experience, we did not observe any indications of toxicity in any of the patients treated at our clinic thus far. This includes the current case, where the hematological and biochemical values of the patient remained within the normal range after undergoing treatment for twenty months. Moreover, no adverse effects were detected throughout the entire duration of the treatment. These findings suggest the safety of the treatment regimen, including the metallic formulations used.In addition, the patient is receiving *Panchtikta Ghruta Guugul*, a combination of guggul, Ghee and herbal ingredients. This formulation helps in managing joint and bone-related discomfort. *Rasayana yoga* is utilized from a preventive standpoint in the context of multiple myeloma. It is employed to promote overall health and well-being, with the aim of reducing the risk of developing multiple myeloma and other health conditions. By incorporating *Rasayana yoga* practices, individuals can enhance their vitality, strengthen their immune system and foster a sense of rejuvenation and longevity, all of which contribute to a proactive approach to maintaining good health and reducing the likelihood of multiple myeloma onset. To complement the medical interventions, the patient is advised to follow a specific diet plan that promotes healthy digestion and strengthens the bones. Additionally, certain dietary restrictions and lifestyle modifications are recommended to maintain a balance of Vata dosha in the body.

Lambda free light chains, components of immunoglobulins produced by bone marrow plasma cells, play a vital role in the immune system. In multiple myeloma, cancerous plasma cells overproduce abnormal immunoglobulins, including free light chains. Elevated levels of lambda free light chains, one of two types, indicate abnormal plasma cell activity and are diagnostic for multiple myeloma. Monitoring these levels is crucial for assessing disease activity and treatment response. A decrease in lambda free light chains post-treatment signifies effective disease control. In the patient, positive responses include decreased lambda free light chains, suggesting disease control, and improved hemoglobin, indicating anemia amelioration. Reduced serum creatinine and blood urea signify enhanced kidney function. Decreased beta-2 microglobulin reflects reduced disease burden. These improvements highlight treatment efficacy in addressing hematological and renal aspects of multiple myeloma, emphasizing the need for ongoing monitoring and adherence for sustained positive outcomes. The treatment approach is carefully designed to address the root cause of *Asthi Majjagata Vata* and provide holistic care to the patient. Regular monitoring and follow-up visits are planned to assess the patient's progress and make any necessary adjustments to the treatment plan, ensuring optimal outcomes and improved overall well-being.The patient's active participation in the treatment plan and adherence to prescribed medications played a vital role in their positive response to the therapy. Despite advancements in therapy, multiple myeloma remains incurable, and relapse or progression is almost inevitable [12]. The emergence of resistant clones and the complex interplay between the tumor and the bone marrow microenvironment contribute to treatment challenges. Therefore, continuous monitoring, personalized treatment plans and ongoing research are crucial in improving outcomes for patients with multiple myeloma. The case study also emphasizes the holistic approach of Ayurvedic medicine, which focuses on promoting overall well-being and preventing future health issues. The concept of using seasonal therapies like *Basti* during specific periods, such as *Varsha Ritu* (monsoon season), further highlights the holistic principles of Ayurveda in maintaining health and preventing diseases.

3. Conclusion

The case study illustrates the potential benefits of integrating Ayurvedic and conventional medical care for managing complex malignancies. The patient's recovery and positive response to treatment reflect the importance of a patient-centric approach, shared decision-making, and personalized treatment plans. The case report underscores the need for further research and clinical trials to establish the efficacy and safety of Ayurvedic treatments on a larger scale.

3.1. Patient perspective

"After being diagnosed with multiple myeloma and facing multiple health challenges, I decided to seek Ayurvedic treatment in September 2021 as an alternative to a bone marrow transplant. The Ayurvedic examination revealed various symptoms affecting my physical and mental well-being. With a personalized Ayurvedic regimen, including dietary adjustments and ayurvedic medicines, I began to experience positive changes. The holistic approach of Ayurveda addressed not only my physical ailments but also provided relief from mental stress. I am grateful for the gradual improvement in my health without adverse effects."

3.2. Informed consent

Before the initiation of treatment, the patient provided written informed consent, demonstrating their understanding to undergo the proposed Ayurvedic treatment. Additionally, the patient granted written informed consent for the publication of their clinical details.

Sources of funding

None

Author contributions

A. S. - Conceptualization, Methodology/Study design, Software Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review and editing, Visualization, Supervision, Project administration, Funding acquisition.

An. S.-Conceptualization, Methodology/Study design, Software Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review and editing, Visualization, Supervision, Project administration, Funding acquisition.

J. C. - Visualization, Supervision.

V. T. - Writing – original draft, Visualization.

Declaration of competing interest

None

Acknowledgement

We extend our sincere appreciation to Dr. D. Y. Patil University for their unwavering support and motivation in the pursuit of research and scholarly writing.

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