CASE REPORT: PROFOUND PANCYTOPENIA DUE TO PRIMARY B12 DEFICIENCY

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INTRODUCTION

Pancytopenia can result from defects in one or multiple stages along the hematopoiesis pathway, with the greatest concern being neoplastic etiologies such as leukemia, lymphoma or myelodysplastic syndromes. Another cause of pancytopenia is nutritional deficits such as Vitamin B12 (cobalamin) deficiency, which can cause macrocytic anemia. Vitamin B12 is a cofactor needed for use in DNA synthesis. Normal B12 levels in the liver range from 2000-4000 mcg, with average daily requirements on the order of 2.5 mcg/day, meaning B12 deficiency must persist for over 3-5 years before deficiencies become apparent.

METHOD

We present the case of a 68-year-old female from eastern Europe with PMH of schizophrenia who presented to our ED with signs of increasing confusion, nausea and weight loss. On arrival she was found to be profoundly pancytopenic, with a WBC of 1.3, Hb of 3.3 and platelets of 27. Her B12 level was 80, and she had normal parietal cell and intrinsic-factor antibody titers, suggesting her presentation was most likely the result of sustained nutritional deficit over multiple years.

RESULTS & DISCUSSION

She responded well to blood transfusions and received B12, thiamine, and folate supplementation, with her most prominent presentation over her nine-day stay being persistent sundowning behavior.

CONCLUSION

As osteopathic physicians, we must always be mindful of the unity of the body, mind and spirit that is every person, and how derangements to one can lead to derangements of the others. Without attention by all dimensions of the health care system and the social support of vulnerable individuals, simple, easily-correctable nutritional deficits may lead to significant pathologies.

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