

Hugh R. Butt, MD, and the Treatment of Jaundice With Vitamin K



While he was in his second year of residency at Mayo Clinic, Hugh R. Butt, MD, using himself as the donor, extracted his own bile and used it in conjunction with Vitamin K to successfully slow down bleeding in a patient.¹ He subsequently published research covering his success with human research and vitamin K in *Mayo Clinic Proceedings* in the June 1938 issue.²

Up to that point, research with vitamin K had been relegated to animal studies. For example, Henrick Dam, a nutritionist who had been developing a diet to discourage a scurvy-like condition in chicks, experimented with vitamin K.³ One difficulty in this early research was obtaining vitamin K in viable and useable quantities. Although dried alfalfa was first used, fishmeal extracts were found to be easier to work with and provided higher amounts of vitamin K.^{2,3} Dr. Butt was fascinated by this research and wondered if vitamin K would have the same results for patients with jaundice. In the 1930s, a patient who was reported to be bleeding to death was given this mixture of vitamin K and Dr. Butt's own bile. Dr. Butt noted that the results were astounding and quick: Within an hour of the treatment, the patient's bleeding was stopped.⁴

The article published in the *Proceedings* reported on the results of the same treatment in 18 other cases. Most of the patients were noted to have obstructive jaundice, but there was also a patient experiencing bleeding from a previous surgery who also responded to the vitamin K and bile solution.² Dr. Butt's article noted that one of the early challenges in his research was determining the appropriate dose of vitamin K. Early theory relied on calculating the weight/food intake/dose ratio from the chick research and applying it to the weight/food intake/dose ratio for a human. Dr. Butt's research proved that success was found at much higher dose ratios. Abbott Laboratories in Chicago, Illinois, worked with Dr. Butt to develop the formulation of the treatment.²

Today we know much more about ways to speed up and slow down bleeding rates in many conditions, and this knowledge is a direct result of the amazing and pioneering research of Dr. Butt published in *Mayo Clinic Proceedings* in 1938.

References

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