Abstract
Thiamin(e), also known as vitamin B1, is now known to play a fundamental role in energy metabolism. Its discovery followed from the original early research on the 'anti-beriberi factor' found in rice polishings. After its synthesis in 1936, it led to many years of research to find its action in treating beriberi, a lethal scourge known for thousands of years, particularly in cultures dependent on rice as a staple. This paper refers to the previously described symptomatology of beriberi, emphasizing that it differs from that in pure, experimentally induced thiamine deficiency in human subjects. Emphasis is placed on some of the more unusual manifestations of thiamine deficiency and its potential role in modern nutrition. Its biochemistry and pathophysiology are discussed and some of the less common conditions associated with thiamine deficiency are reviewed. An understanding of the role of thiamine in modern nutrition is crucial in the rapidly advancing knowledge applicable to Complementary Alternative Medicine. References are given that provide insight into the use of this vitamin in clinical conditions that are not usually associated with nutritional deficiency. The role of allithiamine and its synthetic derivatives is discussed. Thiamine plays a vital role in metabolism of glucose. Thus, emphasis is placed on the fact that ingestion of excessive simple carbohydrates automatically increases the need for this vitamin. This is referred to as high calorie malnutrition.