

The Sage of Tea and the Inherited Metabolic Diseases

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ABSTRACT

Lu Yu (733 -804 AD, Tang Dynasty), was an orphan brought up and educated in a monastery. Because of his deep knowledge of tea, he was also called "the Sage of Tea". From the historical records, we conclude that Lu Yu maybe a patient of IMDs.

Keywords: Lu Yu, The Sage of Tea, Inherited metabolic diseases (IMDs), Traditional Chinese Medicine

INTRODUCTION

Lu Yu (733 -804 AD, Tang Dynasty), was an orphan brought up and educated in a monastery. Because of his deep knowledge of tea, he was also called "the Sage of Tea" [1].

Inherited metabolic diseases (IMDs) are a heterogeneous group of rare diseases with a collective incidence of 1 in 500 to 4,000 live births, representing a substantial public health burden [2-4]. The clinical disorders that arise from a single gene defect and develop as a consequence of a blockage of the metabolic pathways are accepted as inherited metabolic diseases [5], such as phenylketonuria (PKU), maple syrup urine disease (MSUD) and diabetes. Diabetes is a kind of metabolic disease. The cases of diabetes were definitely documented in Traditional Chinese medicine, just as Sima Xiangru (Chinese: 司马相如), Du Fu (Chinese: 杜甫), Ouyang Xiu (Chinese: 欧阳修).

IMDs have recently become an important part of medicine [6]. They are usually classified into 3 main groups:

- Intoxication diseases (i.e., amino-acidopathies, organic aciduria, fructose intolerance and galactosaemia, iron and copper overload, porphyria) [7-9]
- Diseases linked to energy deficiency (i.e., glycogenolysis, mitochondrial diseases, disorders of fatty acid oxidation and ketogenesis, congenital lactic acidosis) [10,11]
- Diseases due to degradation or synthesis defect of complex molecules (i.e., lysosomal or peroxisomal diseases, and congenital disorders of glycosylation) [12]

Over the past decade, a newborn screening (NBS) program was introduced to detect presymptomatic newborns with IMDs, tandem mass spectrometry (MS/MS) has been a major technological breakthrough for the NBS program by providing a way to detect multiple metabolites simultaneously [3,13].

As physicians of maternal and child health hospital of Hubei province, from the historical records, we conclude that Lu Yu maybe a patient of IMDs.

The first, from his origins. Lu Yu was an orphan; he did not know who his parents were. Maybe he was a patient of IMDs, his parents abandoned him because of the specific smell produced by the patients of IMDs [7].

The second, from his autobiography [14]. *The autobiography of Lu Yu* recorded that Lu Yu was ugly in appearance and had a terrible stutter. He was famous for his bad temper and strange character. Ugliness, stuttering, bad temper and strange character are clinical manifestations of IMDs [15].

The third, from his life experience in monastery. In buddhist temple, Lu Yu didn't eat fish and meat, only eat vegetables and congee. Meat and fish contain a lot of protein, by

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contrast, vegetables and congee contain less protein. Low protein diet is one of the important methods to treat IMDs (just as PKU) [16].

The fourth, from his name. Lu Yu had the second name Ji (Chinese: 疾 and the third name Ji Ci (Chinese: 疵). 疾 means disease in Chinese, 疵 means disease related to eat some kinds of food in Chinese.

From these reasons, we can conclude that Lu Yu was a patient of IMDs, especially a patient of PKU. He also knew that low-protein diet was good for his disease and treated his disease in some way of traditional Chinese medicine.

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CONFLICT OF INTERESTS

The authors have no conflicts of interest relevant to this article.

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