

## Rhazes and the First Clinically Exact Description of Hay Fever (Seasonal Allergic Rhinitis)

### Dear Editor,

Even though, the term 'allergy' first appeared in the medical literature in 1906, allergic diseases such as asthma, urticaria and eczema have been known for centuries, and their history dates back to antiquity.<sup>1</sup> In the Middle Ages, 'rose fever' was a well-known entity with symptoms similar to hay fever.<sup>2</sup>

The first description of the clinical symptoms of hay fever (seasonal allergic rhinitis) is attributed to a British physician, Dr. John Bostock (1773-1846).<sup>3</sup> Later, Dr Donald stated that his own 'catarrh' of sneezing, itchy eyes, and nasal congestion occurred only during the summer.<sup>4</sup> In 1828, "he realized that his symptoms was associated with the cutting of hay, and deduced that his problems were in some way related to substances emanating from hay. He thus coined the term 'hay fever'.<sup>4</sup>

Based on Persian historical evidence, Mohammad Zakariyay-e-Razi correctly explained the hay fever (seasonal nasal allergy) in the 10<sup>th</sup> century CE. Razi (865-925 CE), known as Rhazes in the west, was a renowned Iranian physician.<sup>5</sup> He was one of the most illustrious physicians of Iran's "Golden Age of Medicine" from 9<sup>th</sup> to 14<sup>th</sup> centuries.<sup>6</sup> Razi was born in Ray, near Tehran, the present capital of Iran. He learned and practiced medicine relatively late in his life.<sup>7</sup> Razi gave the first accurate description of smallpox and measles. He published his experience in medicine in a 22-volume book called 'Kitab al-Hawi', the Comprehensive Book of Medicine. The book, written in Arabic first, was translated into Latin in 1297 CE. It was known as *Liber Continens* in Europe, and regarded as a classic textbook in European academic centers until seventeenth century.<sup>7</sup>

### *Razi's Clinical Description of Hay Fever*

In al-Hawi, Razi discussed various aspects of diseases including ear, nose, and throat disorders.<sup>8</sup> The book contains 33 clinical case reports, one of which (No. 29) describes a patients with severe hay fever, who developed joint pain after recovery.<sup>9</sup> Moreover, Razi explained the hay fever symptoms in a paper for Abou Zayd Balhki. Abou Zayd Ahmad Sahl-e Balhki (850-934CE) was most likely Razi's philosophy teacher. In the paper titled,<sup>5</sup> "an article on the Reason why about Zayd Balhki suffers from rhinitis when smelling roses in spring", he discussed clearly the main symptoms of hay fever or seasonal allergic rhinitis such as stuffed nose, nasal itching, sneezing and runny nose. He also gave interesting recommendations for the prevention of seasonal nasal allergy including avoiding exposure to smoke, strong perfumes, saffron, and flowers such as roses and sweet basil. He also mentioned that allergy might cause hoarseness, cough and shortness of breath, which are currently known as allergic laryngitis and allergic asthma. In addition, Razi pointed out that hay fever might be aggravated in spring.<sup>5</sup> Razi also suggested the treatment modalities for hay fever in his book titled *Qarabady*n (pharmacopoeia).<sup>10</sup> In another book, named *Tebb al-Mansouri* (the Medical Book of Mansouri), he devoted a section to the prevention of coryza (Zokam) and catarrh (Nazleh).<sup>10</sup> Two manuscripts of Razi's article on hay fever are available; one at Oxford Library, UK (Ms. No. 461) and the other in Malek Library, Tehran, Iran (Ms. No. 4573).<sup>11</sup>

Speaking in modern historical sense, the term "allergy" was coined by von Pirquet.<sup>12</sup> The Oxford Word Histories indicates that there is a "notion of something" in the word of allergy. Moreover, the "Alien" present in allergy come from the German word of Allergie, and Greek word of "Allos", which means other.<sup>13</sup> In 1869, Dr .Charles Blakely (1820-1900) performed the first pollen skin test on himself in England.<sup>1</sup> Then, in 1911, Sir Henry Dale identified the role of histamine in an allergic reaction.<sup>14</sup> Subsequently, in 1948 *chlorcyclizine hydrochloride* (Histamin), a new antihistaminic drug, was used for the treatment of hay fever patients.<sup>15</sup> In the late 1980s, the production of purified recombinant allergens ushered a new era in the diagnosis and treatment of allergic diseases.<sup>16</sup> At present, we know more about allergy, and according to Dr. Weir "the greater understating of the immunology and function of nose has expanded the knowledge of allergy, and has led to a more conservative nasal surgery".<sup>17</sup>

While the investigations about allergy continue, the scientific contributions of the pioneering scholars such as Rhazes to the field should not be ignored.

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