



Endemic Goiter in Kitâbu Divanü Lügat-it Türk: Evidence From 11th Century

Kitabu Divanü Lügatu Türk'de Endemik Guatr: 11. Yüzyıldan Bir Delil

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ABSTRACT

To present the information about endemic goiter noted in Kitâbu Divanü Lügat-it Türk (KDLT), which was overlooked in the history of medicine. The information about endemic goiter noted in the English and Turkish copies of the KDLT was reviewed in relation to goiter and thyroid hyperplasia. Further, KDLT and his author were briefly searched for using historical sources. In KDLT, which was prepared for introduction of Turkish and Turks to the Arabians in the 11th century, Mahmûd El Kashgari (1008-1102), a lexicographer of Turkic languages, noted that the "boquq" (goiter) was widespread among the Turks living in Fargana and Siqni in the Central Asia during generations. By this report, a rare source, and the first direct evidence of endemic goiter in Turks living in central Asia, has been added to the historical corpus of endemic goiter. The information related to endemic goiter in KDLT was previously not known in the medical literature, but it was in accordance with the notes of Avicenna and observations of Marco Polo, who both reported goiter in Asia in the 11th to 13th centuries.

Keywords: Goiter, thyroid gland, history of medicine, Asia, Turks

Öz

Bu yazının amacı, tıp tarihi çalışmalarında gözden kaçmış Kitabu Divanu Lügatu Türk (KDLT)'de bahsedilen endemik guatr bilgilerini sunmaktır. KDLT'nin Türkçe ve İngilizce tercümeleri, guatr ve tiroid hiperplazisi bağlamında gözden geçirilmiş ve ayrıca kitap ve yazarı, makalenin amacı kapsamında, kısaca, incelenmiştir. Türk dilbilimci Kaşgarlı Mahmut (1008-1102) tarafından Araplar'a Türkler'i ve Türkçe'yi tanıtmak amacıyla 11. yüzyılda yazılan KDLT'de guatr, "bokuk/boquq" sözcüğüyle ifade edilmiş ve Orta Asya'da Fergana ve Signi bölgelerinde yaşayan Türkler'de nesiller boyunca yaygın olarak görüldüğü not edilmiştir. Bu yazıyla, ilk kez, Orta Asya'da yaşayan Türkler'de 11. yüzyıl ve öncesinde guatrın oldukça yaygın görüldüğüne dair açık bilgiler, uluslararası guatr tarihi literatürüne eklenmiştir. Uluslararası literatürde KDLT'de endemic guatr ile ilgili bilgiler olduğu daha önce hiç değinilmemiştir. KDLT'deki bilgiler, 13. yüzyılda Orta Asya'nın diğer bir kısmında yaygın guatr olduğuna dair gözlemlerden bahseden Marco Polo'nun seyahatnamesiyle ve 11. yüzyılın başlarında Asya Türk dünyasında hekim olarak çalışan İbni Sina'nın tıbbi kayıtlarıyla uyumludur.

Anahtar Sözcükler: Guatr, tiroid bezi, tıp tarihi, Asya, Türkler

INTRODUCTION

Endemic goiter has been a worldwide health problem. In Asia, medical and non-medical sources manifested its evidence starting from Chinese (29th century BC) and Hindu (21st century BC) medicine (1).

Avicenna (İbn-i Sina; 980-1037), who lived in Transoxiana (Maveraünnehir, "Çayardı") and Khurasan (Horasan) (Figure 1), mentioned swelling in the anterior neck in The Canon of Medicine (El-Kanun fi't-Tib), which was completed in Gurgan ("Gürgen") in

1025 (2,3). However, there is no information on its incidence and the geographic area of its sufferers in the book.

The earliest information about the incidence and locations of goiters in Central Asia was presented by Marco Polo (1254-1324). During his travel in Turkestan in 1271, he noted the following sentence when he reached the province of "Karkan": "they are in general afflicted with swellings in the legs, and tumours in the throat; occasioned by the quality of the water they drink" (1,4,5). In the book about Marco Polo's itinerary written by Wright (5), it is noted that the name of

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this town could have been Yerken or Yarkund. Langer (1) also wrote that it was Yarkant (“Yarkent”) County in this day and age. It is, today, a county in Xinjiang Uyghur Autonomous Region, China (Figure 1). Shaw (6) underlined that the citizens of the city spoke Turkish in the 19th century.

Another piece of non-medical evidence presenting the endemic goiter in Central Asia, back at least 100 years, is the book titled Kitâbu Divanü Lügat-it Türk (KDLT), written by Mahmûd el Kashgari (1008-1102) in 1072-1077 (7-9). This historical source of endemic goiter is not mentioned in the literature on the history of goiter available in PubMed.

KDLT is one of the earliest sources of the Turkish language and history, and it was prepared for the Arabs to introduce Turkish and Turks. It provides information about not only its definition during that period in Turkish, but also its high incidence and geographic distribution in the Turkic regions of Central Asia. The word used for goiter is “boquq/bokuk/bokok” (7-9). In Clauson’s (7) English edition, “boquq/bokuk” has been described as “goitrous flesh” which grows between the skin and the flesh each side of the “Adam’s apple”. Mahmûd el Kashgari also noted as follows: “In Fargana and the regions of Siqni there are groups of people who are characterized by this defect. Each generation acquired these swellings anew. Sometimes they are so large that they prevent people from seeing from their own chests and feet”.

This information is supported in the Union of Soviet Socialist Republics section of the World Health Organization Monograph published

in 1960 (10): “The central Asiatic endemic begins at Bukhara and Samarkand and reaches its greatest intensity in the Region of Ferghana (Kirghiz), especially in the Chatkal Mountains, around the towns of Tashkent, Kokand and Andizhan”, To the south of this area lies the Pamir plateau, abutting the extreme north of Pakistan, where in some valleys, notably that of the river Wanj, which flows into the headwaters of the great river Oxus (Amu-Darya), the entire population without exception is said to suffer from goitre. The endemic goiter of Ferghana and the Pamir plateau is continuous with that extending southeastward through Kashmir and the Himalayas”. They also noted the connection of goitrous regions in Fergana with Yarkand in Marco Polo’s itinerary (1271) as follows: “Grouped with the Ferghana focus is the endemic found throughout the mountains of Semirechensk in “The Land of the Seven Rivers” between Lake Issyk-Kul in the north of Kirghiz and Lake Balkhash in Kazakh (formerly Turkestan). It was in this part of the world that Marco Polo saw goitres when he was on his famous travels from Venice to the court of the Grand Khan in China about the year 1275. After passing through the high Pamirs, he came to the Chinese provinces of Kashgar and Yarkand at the extreme western end of the Takla Makan desert in Sinkiang (Chinese Turkestan)” (10).

In the literature, there are only a few historical texts mentioning the incidence and geography of endemic goiter (in the Alps by Pliny the Elder (AD 23/24-79); in France by Guy de Chauliac (c.1300-1368) and Valescus de Tharanta; in Italy by Arnold de Villanova (1235-1312) (1,2,4) and in some parts of Asia by Marco Polo (1271) as mentioned

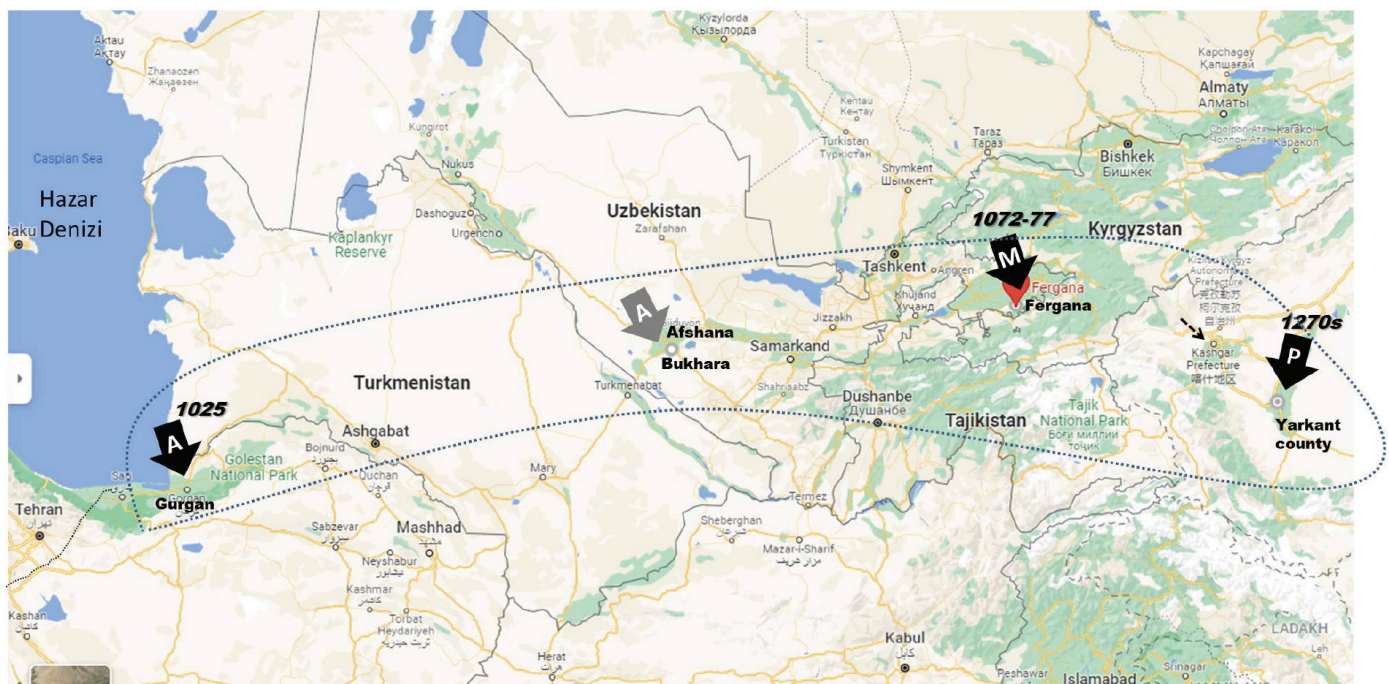


Figure 1. The Google map above presents the towns of Central Asia, which were mentioned in this paper (this map was produced in English by the Google Maps platform on November 10, 2021, and all names were kept as seen, but only the following items were added to improve readability).

“A” represents Avicenna: Afshana, next to Bukhara, is his birthplace, and Gurgan is the town where he wrote the “Canon of Medicine”.

“M” represents Mahmûd el Kashgari; Fergana is the town where he mentioned the high prevalence of goiter in his work named Kitâbu Divanü Lügat-it Türk, completed between 1072 and 1077 in Baghdad. (Bagdad is out of the map.) The small dashed arrow indicates Kashgar, known as his homeland.

“P” represents Marco Polo; Yarkant (“Karkan”) is the town in Turkistan where he noted a high prevalence of goiter in the 1270s, in his itinerary

above (5) Hence, it is clear that Mahmûd el Kashgari provided us a 900 years old-historical evidence for the other end of “endemic goiter belt” in the Central Asia, and this information has never been mentioned in the history of goiter as we have seen.

As we know from history, many Turks living in and around the Gurgan-Bukhara-Samarkand-Tashkent-Fergana valley-Yarkant region (Figure 1) migrated to Anatolia over the next three centuries. This migration began from the years when Mahmûd el Kashgari completed KDLT and continued until the period when Marco Polo visited Turkistan just after Avicenna lived (11,12). Unfortunately, Anatolia is also a territory characterized by iodine deficiency (13) and endemic goiter remains a significant health problem for the Turkish people living in Anatolian towns (13).

CONCLUSION

In conclusion, KDLT completes the history of the Turks with goiter from the easternmost point, Yarkent in Central Asia, to the westernmost, the West Anatolian towns in the Black Sea and inner Mediterranean regions, over more than 1000 years.

Footnotes

Authorship Contributions

Concept: Y.K.K., Design: Y.K.K., Data Collection or Processing: : Y.K.K., Analysis or Interpretation: Y.K.K., Literature Search: Y.K.K., Writing: Y.K.K.,

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