

A Study on the Geographical Environment of the Battle of Da Fei Chuan

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Abstract: By using historical documents, this paper probes into the influence of geographical environment factors on the war process during the war of Da Fei Chuan between Tang and Tubo. It is believed that diseases caused by geographical environment limit the expansion of living space for both Tang and Tubo. Plateau diseases and tactical errors are one of the main reasons for Tang army's failure, and also an important reason for Tang army's being trapped in Qinghai and unable to go further. Through the modern medical concept, the cold disease and altitude reaction are re-analyzed, and the place where Da Fei Chuan War took place is verified, so as to determine the actual influence of geographical environment problems and the constraints of altitude environment on both Tang and Tubo.

Throughout the history of world civilization, diseases and environment change the development trend of human society, which is not a special case of a certain place. Such natural environmental factors include diseases caused by internal geographical environment, thus restricting the flow and migration of foreign population. There is also reverse transmission of epidemic diseases caused by the movement and migration of foreign population. However, whether it is positive restriction caused by natural environmental factors or reverse destruction, it is an important factor that cannot be ignored in observing the rise and fall of human civilization. When different civilized groups are expanding because they seek living space, the people in the originally closed environment begin to contact with the outside world. The environmental changes and epidemic diseases caused by geographical factors, biological factors and medical factors in this process indirectly affect the history of human society itself. For example, in the war between Tang and Tubo, although previous studies mentioned the influence of the special geographical environment of the Tibetan Plateau on both sides of the war, they mostly focused on summarizing the influence of the natural environment and ethnic constitution on the outcome of the war, or on the limitation of altitude reaction on a single party, or merely put forward the meaning of "miasma", failing to make a relatively clear statement on the causes of altitude reaction and the influence of geographical environment factors on Tang army's war. Therefore, this article will discuss this issue on the basis of historical documents and geography in combination with modern medical research.

1. The Meaning of "Cold Plague"

(1) The debate between malaria and cold Songfeng said epidemic

"The new Tang book Tubo biography" contains, "There are many thunders, electricity, wind, hail and snow in the country. In midsummer, it is like spring in China. The valley is always icy. There is a cold disease in here, and those people who have this disease will tend to be rash but not harmful." The Wuhai and Yellow Rivers, there are many blocks, and cold Plague are popular so that Tang Dynasty cannot enter." The article said Tubo because of the wild environment, the ground is more cold, so Tang Jun can't go deep, so here cold plague is what disease? Restricted by the level of medical development at that time, the ancient Chinese medicine mostly used the word "miasma" to describe various diseases caused by geographical environment. It was first found in Shennong Herbal Classic in the Eastern Han Dynasty. Similarly, there were many words specifically referring to epidemic miasma, such as "miasma", "plague" and "malaria". Although the names in these documents are different, the internal meaning of these words is not essentially different. Sometimes

it refers to the cause of disease, sometimes it refers to the disease, and most of them refer to epidemic diseases caused by damp heat and stagnation in southern regions. The onset of the disease is characterized by the rapid onset of the disease, as stated in "Songfeng said epidemic ". Infected people are easily killed by the disease. Although malaria is the same as cold plague, and has the characteristics of rapid onset, large number of susceptible population and high mortality rate, the causative factors are mostly infectious diseases such as malaria, which are only limited by the cognitive level at that time. Therefore, most diseases such as "malaria", "cold plague" and "pestilence" are classified into one category, and the "cold plague" in plateau area is also considered to be caused by "all pathogens causing diseases due to damp heat and stagnation in mountain forests". However, after comparing the incidence areas of the two diseases, we can clearly see that malaria occurs mostly in the southwest of China, which is inversely related to the altitude, and the high incidence areas are mostly below 1100 meters above sea level. However, the incidence of cold plague is positively related to altitude. The high incidence area is above 3000 meters above sea level. The geographical environment of the two areas is obviously different. The cold plague here should be caused by altitude reaction, so it cannot be confused.

2. Altitude Sickness

Altitude stress, also known as altitude sickness and mountain sickness, is strictly a type of altitude sickness. "Geography refers to the vast area with an altitude of 1000m, relatively flat terrain or some ups and downs as plateau. The altitude above 3000m is called plateau in medicine. Unconventional personnel who quickly enter the plateau from the plain will have symptoms such as deeper respiration, faster heart rate, headache, dizziness, insomnia, flatulence, diarrhea, etc. It will seriously affect the health of personnel and reduce the capability of military operations. "With the rising of the altitude, the incidence rate is as high as 90% when the altitude exceeds 4000m.

In the Da Fei Chuan War, Xue Rengui chose to leave the trench troops in Da Fei Chuan to solve the problem of "land danger and malaria". He led a light cavalry to fast forward. This means that the problem of altitude reaction caused by rapid marching and fighting on the plateau has been ignored, and when Guo Shifeng loss the army's food, the army faces difficulties in supplying. Hunger, fatigue and weak physique are all factors that affect AHAD. Secondly, we can see from time that Xue Rengui led the army of 1911 in April of the first year of Xianheng, and Wuzi was attacked by Tubo's general Lun Qin Mausoleum in July, which happens to be the spring and autumn season. We know that "seasonal factors are also important external factors. Low temperature and strong wind in the plateau in winter and spring promote the increase of endogenous metabolism, oxygen demand and morbidity." It can be said that this time Tang Jun has no advantage in terms of weather and geography. Furthermore, experiments have found that psychological changes of Tibetan personnel also determine the incidence of AMS. Among the three states of excitement, nervousness and fear, and no change, the incidence of nervousness and fear is the highest. At this time, Tang army's food was robbed, and changed from taking Wuhai lightly to retreating to Da Fei Chuan. The period was as long as February and March. The psychology of Tang soldiers was hardly unaffected under the condition of hunger and cold. The Tubo soldiers have a unique advantage in adapting to the local environment from a physiological and genetic point of view because they have lived in the Tibetan plateau for a long time, thus occupying a considerable advantage in the battle of Da Fei Chuan". The level of NO (with vasodilator effect) in Tibetan high-altitude population is 2 times higher than that in low-altitude population", which has a good adaptability to the plateau environment.

3. The War of Wuhai

Although the battle between Tang and Tubo for Tuguhun is called "the battle of Da Fei Chuan", the main place of the war is Wuhai, which is in front of Da Fei Chuan. Therefore, this paper holds that the defeat of Wuhai directly led to Tang Army's retreat from Da Fei Chuan and the defeat of the army. The former literary theory talked about the external influence of the plateau environment on Tang Army's participation in the war, so here we will make a concrete analysis of the location and

altitude of Wuhai and other places. Although there is no clear record of the source of the troops for this march, it can be deduced from the contents of the "Biography of Tubo in the Old Tang Dynasty". In the last three years of the Yuan Dynasty, when the Tubo attacked and plundered the states of Kou Shan and Kuo, the Emperor ordered the Minister of State Liu Rengui to guard the Taohe Army, "still recruiting the most valiant soldiers in Guanzhong, Hedong and other states, thinking that they were brave soldiers and not simply serving." Then the word "still" here reflects that the soldiers who dominated the northwest defense in the past mainly came from Guanlong. From April of the first year of Xianheng in Xue Rengui, Xinhai led the attack and went to Shancheng, then reached Da Feichuan and Wuhai. In July, Wuzi was defeated by Tubo General on Qin Mausoleum, which was less than March. From the point of view of modern medicine, Tang Jun cannot get used to entering the plateau step by step in such a short period of time. Faced with such a large altitude difference, it will inevitably lead to altitude reaction.

The geographical position of Wuhai is generally described in two ways: in Guoluo Prefecture south of Qinghai Lake and in Xunhua County east of Qinghai Lake. Today, Tibetan scholars generally agree that "Wuhai" is south of Qinghai Lake, that is, Huashixia Town, maduo county, Guoluo Tibetan Autonomous Prefecture, Qinghai Province, "East to Tsona Lake" (4,225 meters above sea level). As Xie Quantang said: "Wuhai should be located in the area of Huashixia, maduo county, Guoluo Autonomous Prefecture today. There is not only a series of small lakes in the area that connect to Lake Toso (which means black in Mongolian) and are consistent with the records of the Qiwu Sea in Sui Shu Geography, but also places like the Black Sea are still preserved today." Ren Naiqiang said: "(Wuhai) is the Tuosuo Lake in Hainan Prefecture of Qinghai Province today." In addition, Xiawujiaoba, according to the statements of Gendun qunpei and Ttudeng pengzao, combines the view that "Wuhai" is located in the territory of Xunhua county today with the local legend of "anidayan mountain deity". It holds that "the" Wuhai "of Tang dynasty or the" Dongdaicuona "(winter cuona lake) of Tubo can be located in the holy lake named" Donggrizcuona lake "or" Mengdatianchi "at the junction of Mengda township, Daxun Tibetan township and Dahejia town in Xunhua county today. However, its altitude is no more than 2,500 meters, so the word "land is dangerous and malaria" in Tang Dynasty cannot be understood. Therefore, Wuhai and Dafechuan should be located in Hainan, with an average altitude of over 3,000 meters, which is already a plateau region in the medical sense. The average altitude of Guanzhong region is 1,127 meters. Tang Army has come all the way from the low altitude region. Whether it is "Wuhai" or "Dafechuan", the altitude has risen rapidly by 2,000-3,000 meters. Without acclimatization, it is bound to easily cause altitude reaction.

4. The Natural Environment Restriction of Tang and Tubo

After Da Fei Chuan, Tang Jun fought with Tubo many times in Qinghai, but Tang Army, who was originally good at fighting at low altitude, was defeated as soon as they entered the plateau. For example, Tang Army "fought against Longzhi first, and Tubo was defeated." Jing Xuan led Liu Shen Li to attack Tubo Qinghai and to examine whether the ritual war had taken place. "Next year, the hydrophobic please since the effect of Dijon brigade, so worship the rest road marching big manager, overseers 36 manager to beg Tubo, into the seal Fuyang county. The army came to know the Jiahe River and fought with Tubo. After the initial victory, it was defeated. It's also cold and snowy, with many soldiers dying and no food to feed. It's the moon that spins the bow, and it's stopped at Gaochang. "In the above two battles, Tang Army won first and then lost. The reason is nothing more than the plateau environment in Qinghai and the supply factors of the Western Regions, which are "cold and snowy, many soldiers die, and food supplies are not enough". After Xue Rengui and Liu Shenli lost to Qinghai with 100,000 and 180,000 troops respectively, Tang Jun no longer had the strength to penetrate into the interior of the Qinghai-Tibet Plateau.

Nature is fair to human beings. People in low-altitude areas need to get used to high-altitude areas step by step to reduce altitude reaction. People in high-altitude areas also need to go through step by step to adapt to low-altitude areas, especially hot and humid environments. "The Tibetan Biography of the Old Tang Dynasty" reads: "Tubo invades the country and persists in autumn and

winter. And in spring, they often retreat from diseases and epidemics. "Dunhuang unearthed Tibetan" chronicle", recorded the Tubo Zanpu's main activities and major wars. In this document, we can clearly see that any attack on the Tang Dynasty initiated by Tubo troops is basically conducted in summer. "In the first year of Guangde in Tang Daizong, Tubo took advantage of the chaos of Anshi to lead to the decline of the Tang Dynasty's national strength and went straight to Chang'an. However, on the 15th and also in the "Biography of Tubo in the New Tang Dynasty", it was said that the Tubo army was shaken out because Guanglu Qing Yin Zhongqing led 1,000 people to visit Lantian and called Guo Ziyi with 200 riders. This article is deeply suspicious. At that time, "Guo Ziyi led hundreds of people and his wife's servants to enter Niuxin Valley in the south, camel carriages and oxen numbered several hundred taels, and the child instrument stayed late, which was unknown to them." The defeated soldiers of the 6th Army were robbed by soldiers and officials were unable to avoid it. As a result, the Tubo army had just won a big victory and did not fear to fight against Tang Army. As for "Zhong Qing Shuai rode more than 200 games and crossed the Xunshui River directly", Tubo thought that Guo Ziyi's army was coming, and the Tubo army believed in it. This is a big question. In fact, it is not difficult to find that the low altitude area, especially the hot climate in Chang'an, is the main reason for the withdrawal of the Tubo people. This situation is also not a precedent. There is no record of the Wang Xuance incident in Tibetan history books. However, according to "White History", Tubo initially occupied Djarheda in India during the Songzangambu period. After the Tubo team occupied the area, it withdrew because the climate was "extremely hot" and it could not stay for a long time. The customs territory is close to the capital city, the climate is hot, and the left and right sides are restrained by Shuofang soldiers and Shannan Road, etc. They are unable to occupy it for a long time. Therefore, they mainly plunder human beings and animals and soon seize them.

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