The general development of Chinese ophthalmology from its beginnings to the 18th century

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The infancy period of Chinese ophthalmology (1324 BC-220 AD)

Chinese medicine has a long history and there are a great number of historical records about the ancient Chinese people struggling against diseases. Some of the records are found in our oldest writings discovered in modern times. For instance, not a few diseases were mentioned in the prayers and divining words of the royal family which were engraved on the shells and bones dug out of the ruins of the Yin Dynasty – the remnants of the Wu-Ding Period (1324–1266 BC) in Anyang, Henan Province. The record of eye diseases is the earliest record of ophthalmology in our country. In the ‘Hill and Sea Classic’, an old book written in the period of the Qin Dynasty, more than 100 drugs are mentioned, and among them seven are related to eye diseases. Besides the ‘Hill and Sea Classic’ the ‘Book of History’, ‘Book of Odes’ and ‘Poetry of Chu’ are books recording the drugs used by our ancestors. According to the book ‘Huai Nan Zi’, fraxinus bungeana was beneficial to eye diseases and this kind of plant is still commonly used in Chinese medicine. Owing to the increase of the kinds of drugs and knowledge in pharmacology, a special study concerning herbs came into being. The first book on herbs in China is the ‘Shen Nong Materia Medica’. It was probably completed in the Han Dynasty and is evidently a summary of the pharmacology before that time. In this book, 365 drugs including plant, animal and mineral ones were studied, those related to the eye being more than 70 – more than 40 related to promoting visual acuity and more than 30 to treating eye diseases. Some of these drugs, such as coptis chinensis and juglans mandshurica, are still valuable nowadays.

In the old books of the Qin Dynasty, one can find the character ‘mu’ but not the character ‘yan’. It was after the Qin and Han Dynasties that the character ‘yan’ was gradually used. Therefore in the scripts on shells and bones eye diseases were called diseases of ‘mu’ instead of ‘yan’.

Concerning the record of blind men, in the ‘Book of History’ there are such sentences as ‘The blind man beat the drum’ and ‘The blind man made poems’. The musician Shi Kuang was a blind man. Among the famous blind
men in the olden times there was ‘Zi-Xia’, a student of Confucius. For it was recorded in the ‘Tan Gong’ that ‘Zi-Xia’ at the age of 103 wept inconsolably over the death of his son. He subsequently lost his sight. Zuo Qiu Ming, the author of ‘Spring and Autumn Annals’ was also a blind man, for it was mentioned by Si Ma-Qian that ‘Zuo Qiu’, even though blind, wrote the book ‘Guo Yu’. Judging from a line in the ‘Book of Odes’, blindness was classified into two categories at that time: blindness with and without pupil. Polycoria, regarding Emperor Shun (2255–2205 BC) mentioned in the ‘Xun Zi’ and Xiang Ji (232–202 BC), is noted in the ‘Historical Records’. Both are the earliest records in the world about abnormal pupils. According to the ‘Historical Records’, it was said by Confucius that King Wen had farsighted eyes, and according to ‘Spring and Autumn Annals’ Chen Boa looked at things with his head elevated. These are probably the earliest records about errors of refraction.

The ‘Canon of Internal Medicine’ is an old medical book in our country, written in the period of ‘Spring and Autumn’. The eye diseases mentioned in this book consist of blindness, swelling of the lower lid, jaundice of the conjunctiva, redness, pain and impairment of vision. In ophthalmology, the concept of taking the eye as a part of the whole body was stressed. In this book there is the early record of acupuncture in treatment of eye diseases. ‘If redness and pain of the eyes start from the inner canthus, Yang Jiao should be taken as the needling point’. In its ‘Ling Shu’ section, there are such descriptions: ‘The blood in 12 channel systems and 365 branches goes up to the head, and the positive spirit gets to the eye and makes the eye clear’.

In the ‘Canon of Internal Medicine’ the theory of the five elements (gold, wood, water, fire and earth) is also adopted. The five viscera are regarded as corresponding to five elements, and the eye is regarded as the spirit of all the viscera. So the theory of five elements was applied to ophthalmology. In ophthalmic physiology, Guan Zi considered ‘The eye comes from the “liver”, and the ear from the “kidney”’. It means that during embryology the “liver” develops the eye. Pupil, cornea, conjunctiva, eye muscle, inner and outer canthus etc. are further differentiated.

The cause of eye diseases is considered due to overuse and rest for recovery is emphasized.

Besides acupuncture treatment, the ancient people knew how to treat corneal ulcer with cautery, since it is said in the old book ‘Huai Nan Zi’: ‘The eye diseases, if not harmful to the sight, should not be cauterized’. Once, Si Ma Shi, the Emperor, of the Jin Dynasty (265–420 AD) had a tumor in his eye and had it excised, according to the ‘Book of Jin’. It was the earliest record of excising ocular tumors in our country.