

IMPACT OF IBN SĪNĀ ON PULSE EXAMINATION AND
MATERIA MEDICA OF MEDIEVAL PERIOD OF ĀYURVEDA

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Ibn Sīnā was the most outstanding figure in the field of scholarship after the death of Aristotle (332 B.C.). He was a universal genius belonging to the whole of humanity, whose message endures with time, for it has captured something of the eternal wisdom which is cherished whenever thinking men gather together irrespective of time and space. Ibn Sīnā's chief claim to greatness in medical sphere is due to his remarkable attempt at a synthesis of all medical knowledge known up to his time. This shall remain secure for all times to come. His writings comprise 68 books on theology and metaphysics, 11 on astronomy and natural philosophy, 16 on medicine, and 4 in verse—99 books in all. Apart from these Arabic books, he wrote in his native language, Persian, a manual of philosophical sciences and a treatise on Pulse. He is respectfully called *Ash-Shaykhur-Ra'īs* (the chief master).

QĀNŪN

The *Qānūn fil-Tibb* is of course by far the largest, the most famous, and the most important of Ibn Sīnā's medical works, and at the same time most accessible. The work contains not less than a million words, and, like most Arabic books, is elaborately divided and subdivided. The main division is into five books, of which the first treats general principles; the second, simple drugs arranged alphabetically; the third, diseases of particular organs and members of the body, from the head to the feet; the fourth, diseases which, though local or partial in their inception, tend to spread to other parts of body, such as fevers; and the fifth, compound medicines.

IBN SĪNĀ'S VIEW ON PULSE

The description of the main features of the pulse which Ibn Sīnā has described are of outstanding importance. He has mentioned in his *Canon of Medicine* that

the physicians have laid down the following ten features for examining the pulse :

(1) Size, *i.e.* in the degree of expansion as estimated by its height, length and breadth. The pulse has thus nine simple and a large number of compound varieties. The nine simple varieties of the pulse are the long, short, and medium; the broad, narrow and medium. The various compound varieties of pulse are worked out from combinations of the simple varieties. Some of these varieties have special names, others have none. Thus, a pulse which is large in length, breadth, and height is called a pulse of large volume and one which is small in these dimensions is called the pulse of small volume. The average pulse between these two is known as a bounding pulse and that which is small in this respect is called a thin pulse. A pulse which is average of these two extremes is a medium pulse.

(2) Strength of the pulse beat as felt by the fingers. The strength of the pulse may be strong, feeble or medium.

(3) Velocity of the pulse beat, *i.e.* speed. The velocity of the pulse beat may be quick, sluggish or medium.

(4) Quality of the vessel wall. This may be soft, hard or medium.

(5) Fullness or emptiness of the artery. The pulse may be full, collapsing or medium.

(6) Temperature. The pulse may be hot, cold or moderate in temperature.

(7) Rate, *i.e.* frequency. The pulse may be rapid, slow or medium.

(8) Consistency or inconsistency regarding the various features.

(9) Regularity, and

(10) Rhythm. Rhythm of the pulse is time relation between two periods of movements and the two periods of rest. The pulse may be arhythmic or dysrhythmic. Dysrhythmic pulse is of three varieties : (a) pararhythmic in which the rhythm of a child's pulse is like that of the pulse of a young man ; (b) heterorhythmic in which the rhythm of a child's pulse corresponds to that of an old man's pulse ; or (c) arhythmic in which the rhythm is so utterly abnormal that it does not correspond to the rhythms of any age. Marked deviations of rhythms indicate gross derangement in the body.

For usual practice, regarding the site of examination of the pulse Ibn Sīnā has mentioned that pulse is felt by palpating the (radial) artery at the wrist. He has given three possible reasons for artery to be chosen for the examination of the pulse. Firstly, it is more accessible. Secondly, it can be examined without embarrassment to the patient, and thirdly, it is in direct continuation of the heart and

quite close to it. Regarding the method of examination he has stated that the forearm should be kept in the mild prone position because in thin and weak persons pronation increases the height and width of the pulse but decreases the length, while supination increases the height and length but decreases the width.

It is also important that the pulse should be felt when the subject is neither angry, nor excessively happy or under stress of exercise or emotions. His stomach should be neither overloaded nor altogether empty. He should also not be out of breath. The subject should neither have given up any of his long-standing habits nor should have adopted new ones. In order to make a proper assessment of the various changes it is important that the pulse should be compared with that of a temperamentally well balanced person.

PULSE IN ĀYURVEDA

In the works of Āyurveda till the period of Śāraṅadhara the word *Nāḍī* has been used in various denotations for the pulse. Though the theoretical knowledge has been derived from *Tāntrik* literature and the practical one from Greco-Arabic system of medicine, Śāraṅadhara has been the first authoritative Āyurvedic physician who has explained the knowledge of pulse examination in the third chapter of his work—*Śāraṅadhara Saṃhitā*. And there we see the dawn of pulse examination as a means of diagnosis. From that onward the knowledge has constantly been gaining momentum till the period of Yogaratnākara.

IBN SĪNĀ AND MATERIA MEDICA OF MEDIEVAL PERIOD OF ĀYURVEDA

In the pharmacopoeia of ancient Āyurveda, the herbal therapy was dominant. In the medieval period of Āyurveda almost a revolution occurred. The forward thrust of this revolution was the use of poisonous and effective drugs and inclusion of mercury and other metals and minerals. This revolution which was ushered in the 14th century almost became a movement especially in North India. The present authors are of the opinion that such a qualitative change in Indian medicine might have got a stimulus due to Unānī medicine and later on it developed on its own indigenous genius. Though quite a few drugs have been introduced in Indian Materia Medica of Āyurveda during medieval period, opium and mercury stand as shining examples of the same.

Opium :

According to Watt, Greeks are given the due credit for the discovery of opium, but the Arabs most undoubtedly carried to the utmost corners of the Eastern countries the knowledge of that drug. In the first instance, they made it known to Persia and subsequently to India and China. Muslims explained the properties of opium to the people of India. According to Jolly the cultivation of opium in

India is found since 16th century and formerly the Indian physicians imported it from Arabia. The designation of opium as *ahiphena*, 'serpent foam', is evidently only a popular etymological transformation of the old *āphena*, *āfim*, *āfin*, *āfuka* and these expressions go back to one of the Arabic words (usually *āfyum*).

Mercury :

Mercury enters in the medieval Āyurvedic pharmacopoeia as a flash point. Cakradatta (11th Century A.D.) mentions of *Rasa-parpati*—mercury and sulphur heated together and converted into a scale preparation. Some claim that mercury is mentioned in classical literature of Āyurveda but used only for external medication. Internal and copious use of mercury is found only during the medieval period.

Purification (*śodhana*) by heating and subsequent immersion in certain fluids, and the 'killing' (*māraṇa*) i.e. the calcination or the powdering of mercury, and the other metallic processes which make it to be fit for pharmaceutical application, are not mentioned in classical Āyurvedic literature. Watt leaves the question whether the Indians knew the medicinal effects of mercury before or after the Arabs. According to Jolly, the calcination of mercury is traced only to Islamic epoch ; it may be believed that it originated from Arabic alchemy in which mercury plays such a great role.

CONCLUSION

Because of historical reasons there is a natural tendency to avoid objective assessment of social influence of Greco-Arab (Unānī) medicine on Āyurvedic medicine in India. It is often correctly mentioned that many Āyurvedic books were translated in Arabic at Baghdad in the eighth century A.D. It is natural to expect the influence of Greek and Indian medicine on Ibn Sīnā. But the Āyurvedic medicine was also influenced by Unānī medicine. Ibn Sīnā was not only a great physician but also an intellectual movement. It is on record that his famous book, the *Qānūn* was followed by the practitioners of Unānī medicine in India especially from the twelfth century. There was a peaceful co-existence between Unānī and Āyurvedic systems of medicine. There are enough evidences on record that both systems of medicine benefited from each other. A seventh century Chinese traveller recorded that Āyurvedic physicians were not examining the pulse of their patients. The pulse examination and use of opium have been recorded by *Śāraṅgadhara Saṃhitā*, a book on Āyurvedic pharmacy written in Rajasthan around thirteenth century. There are some who claimed that the pulse examination has come in Āyurveda by Tamil Siddhas. The historical evidences are scanty and controversial. The majority opinion is that the pulse examination was developed in Āyurveda due to the influence of Ibn Sīnā's Greco-Arabic medicine. This is also the case with opium and mercury. The authors are of the opinion that a contact of Unānī

with Āyurvedic medicine in India stimulated the use of pulse examination and inclusion of many new drugs like opium and mercury. Āyurvedic medicine did not feel inferior to accept any new idea or drug from Unānī medicine because Unānī medicine was also adopting the Āyurvedic drugs. It is historically and scientifically true that Āyurveda got stimulation from Unānī medicine to adopt pulse examination, opium, mercury, etc. only to develop later according to its own genius and principles. The evidences are many on this aspect. The pulse examination and therapeutic uses of mercury and opium became so admirably frequent in Āyurvedic medicine later that some feel shy of admitting that initial stimulus came from Unānī medicine. History never moves in a linear way and history of medicine even more so. History of medicine cannot ignore the effective new drugs because it has to deal with sufferings of the people. Therefore, Āyurvedic system of medicine has no option but to follow this logic of history of medicine. In this historical perspective the impact of Abū 'Alī Al-Ḥussain 'Abdullāh Ibn Sīnā is really remarkable on Āyurvedic system of medicine especially on pulse and *Materia Medica* of the medieval period.

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