

IBN-SINA 'S CONCEPT OF CARDIOVASCULAR DISEASES.

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ABSTRACT

Ibn-Sina's description of cardiac diseases has been logically and scientifically presented perhaps for the first time in the history of medicine through a classified description of cardiac diseases. The terminology employed by him is basically Greco-Arabic. Ibn-Sina with his logical mind, classified drugs according to their potency of overcoming malhumours. He is the first physician to correlate the diseases of the heart with the temperament and psychic make up of an individual.

While it is true that the problem of cardio-vascular diseases had been, as should be natural, studied by earlier physicians, Ibn-Sina's description of cardiac diseases has been logically and scientifically presented perhaps for the first time in the history of medicine through a classified description of cardiac diseases. He has also listed sixty-three drugs for use in cardiac diseases, particularly drugs of N.O. Compositae which abound in dicoumarol, an anti-clotting factor.

He states in his general description of cardio-vascular diseases that

pathological temperament may be simple or due to the accumulation of toxic matter; inflammatory processes; embolism (of the cardiac coronary arteries). Another condition that may supervene is that of discontinuity occurring in the heart or the pericardium which is termed cardiac arrhythmia in modern terminology. Lastly, he describes "functional" diseases of the heart.

In the case of the accumulation of toxic matter, the matter may be deposited in the vessels or the cavities of the heart, in the cardiac muscle itself or in the space be-

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tween the cardiac muscle and the membrane that envelops it, i.e. pericardium. In the latter case the condition occurs when the pericardial space gets filled with fluid. It should be obvious that, in case the fluid is in large quantities, there will be pressure on the heart in diastole or dilatation of the heart. His mention of "inflammatory processes" borders on inspiration, for here he anticipates the different kinds of acute or chronic myocarditis, e.g. acute bacterial myocarditis, Fielder's myocarditis; chronic myocarditis due to rheumatic fever, for example, fibrous myocarditis, idiopathic myocarditis; and other kinds of inflammations of the muscular structure of the heart. The "toxic" matter also includes bacteria, as elsewhere in the *Canon* he anticipates the existence of bacteria. This definition also includes infarction.

Ibn-Sina further observes that if the pathological temperament becomes stable, i.e. it does not respond to any kind of treatment whatsoever, then treatment is nearly impossible. It is, he states, not easily responsive to treatment, even if unstable.

The terminology employed by Ibn-Sina is basically Greco-Arab, but making allowance even for that, the concept has been presented very lucidly. He makes further original observations

Hot inflammation (acute arterial) of the heart is always fatal at once. The cold inflammation (passive venous congestion) is not so rapidly fatal, but is very rare, so infrequent. The cold inflammation (oedema) can be of hard or soft type (hard oedema is probably of lymphatic type and soft of the venous type). If the cold inflammation occurs at all, it affects the heart covering (the pericardium), and, although it is not at all good. The inflammation (oedema) of pericardium, if of the hard type, is due to thick humour, and if of soft type, it is due to watery humour.

Oedema has been defined as "the presence of excessive amounts of fluid in the intercellular tissue spaces of the body, due to increased transudation of fluid from the capillaries". According to the Greco-Arab theory of humours, the answer for Ibn-Sina would be in drugs according to their property of evacuating

the humour, in this case, phlegm.

Thus myrobalans, especially *Emblīca officinalis* Gaetn, and *Terminalia chebula* Retz., should be potent evacuating agents for both hot and cold inflammations. Silk pod or silkworm cocoon also helps to expel phlegmatic humours. Bolus *Armenia rubra* (*Armenian bole* or *tin Armini*), a mineral indigenous to Iran and Armenia, is hot in the first degree and dry in the second. It is desiccative, astringent, revulsive, and resolvent. It is employed in treating swellings and external inflammations. Ibn-Sina with his logical mind, classified drugs according to their potency of overcoming malhumours.

Ibn-Sina has also prescribed polypharmaceuticals which had been devised earlier and a few have been prepared by him. The latter especially comprise electuaries, the rationale for which according to him, is as follows

The effect of theriac is equal to or more than two electuaries. However, those who are bold enough in prescribing (huge doses of) theriac do not think it to be so powerful as to prescribe it niggardly. The two

theriacs acquire the properties (of doubling the potency and heat) after fermentation. You should not be tight-fisted in the use of fermented theriacs, though both former and later physicians have shown equal courage in administering *habb ghariqun*, *habb muntin*, *ayarij lughazīa* and *ayarij arkaghanis*. When I reflected, I found theriac hot in one degree and mithridates lesser. When temperament acquires ability to accept extrinsic heat, it does so only through fermentation, which can be determined from experiment rather than inference....

His approach to the diagnosis of the condition and state of the heart can be assessed from: (1) pulse, (2) respiration, (3) the form of chest (to see whether the temperament is hot or cold) (4) hairs growing on the chest wall (also showing the temperament), (5) the general feel of the body, (6) other palpable conditions, (7) the general condition of the body (whether strong or weak) and (8) thoughts and hallucinations.

The rapidity and equality of the pulse indicates the types of heat of the heart, while slow and unequal

pulse would show that cold is overpowering the temperament of the heart. A soft pulse shows that there is fluid inside the heart, whereas hardness is indicative of dryness and also that the heart possesses normal strength. A forceful pulse, and if unequal, regularity in inequality (rhythmic arrhythmia) indicates a better heart. Pulses of types opposite to those mentioned above indicate that the state of the heart is opposite to what it should be.

Ibn-Sina defines a healthy heart as one in which the vital heat and animal spirit are so proportioned that there is no irritation or excitement inside, and instead there is pleasantness and lightness as is present in *Nur* (the Light of God). He further states:

The heat of the heart which is of any causative origin has the characters of inflammation and irritation and so produces roughness of the mind (ego), and many times the soul is also affected.

The first translation of the *Qanun* into Latins was made by Gherardo of Cremona, and many partial edi-

tions of this translation were printed before 1500.A.D. The Venice edition (1582) contains *Liber Canonis De medicinis cordialibus* (translated by Villanova), *Cantica* (translated by Armengaud), *De removendis nocumentis* (translated by Andrea Alpaga of Belluno), and *De syropo acetoso* (also translated by Andrea Alpaga).

Ibn-Sina's *Al-Adwiyat al-Qalbiyah* (Cardiac Drugs) first came to light when the late Hakim 'Abd al-Latif published its Urdu translation from the Arabic text of the manuscript housed in the Iran Society, Calcutta, India. Earlier, the late Dr. O.C. Gruner had published free translation of certain parts of the tract which he included in his treatise on *The Canon of Medicine*. Ibn-Sina is the first physician to correlate the diseases of the heart with the temperament and psychic make-up of an individual. Hakim Abd al-Latif has described in considerable detail his search for the Mss of this work which reflects the originality of Ibn-Sina's thought. For instance, Ibn-Sina is of the view that certain traits in man, e.g. jealousy, animos-

ity, courage, cowardice, niggardliness, and munificence, joy and sorrow, choler and equableness, can be regulated through therapeutic regimen. This is a totally new approach and its repercussions are to be found in the medicine of today.

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published in 1983 *Greco-Arab Concepts on Cardiovascular Diseases* edited by this writer and *Avicenna's Tract on Cardiac Drugs and Essays on Arab Cardiotherapy* edited by Hakeem Abdul Hameed. Both books etch out the relevance of Ibn-Sina's tract on cardiovascular diseases in the context of our world.

हृदय एवं रक्त संवहनी संबंधी रोगों के विषय में इबने सीना का मत

— हकीम मोहम्मद सईद

आयुर्विज्ञान इतिहास में संभवतः पहली बार इबने सीना ने हृदय संबंधी रोगों के विषय में वैज्ञानिक, तर्कसंगत एवं वर्गीकृत ढंग से वर्णन प्रस्तुत किया है। यह प्रस्तुति बहुत ही सुबोध है तथा इसमें प्रयुक्त पारिभाषिक शब्दावली मूलतः यूनानी तथा अरबी है।