



THE “HEART-MIND” IN ANTIQUITY AND IN CONTEMPORARY MEDICINE

The study of ancient science and ancient medicine involves many difficulties and concerns. Science did not exist in ancient times, simply because it is a product of the modern period. Science can even be defined as the main cultural feature by which we could identify the modern times as different from previous centuries. In the antiquity, science, magic and religion always remained strictly related, to the point that they cannot be separately understood. Even cardiology did not exist in ancient times for two fundamental reasons. First, because medicine was an integrated knowledge without specializations and sub-specializations, which emerged only in modern times and were institutionalized only during the past century. Second, because the cardiovascular system was not well understood anywhere in antiquity, at least before William Harvey’s discovery of systemic circulation in 1628. The “heart” was not understood as a pump, but for most of ancient medical systems it remained the centre of cognitive thinking or mind, since the brain as an organ was also largely misunderstood. According to Egyptian medicine, Ayurveda and Chinese traditional medicine, the heart was the seat of mind, emotion and soul. Moreover, “spirits”, “energies” and “humours” were collected by the heart and from the heart distributed through the body. Cardiovascular system was a sort of pneumatic and energetic system where the breathing was often view as the crucial function for the generation and circulation of spirit and energies, as well as for the well-being of both the mind and the body. The quality of the radial “pulse” was considered diagnostic for the physiological or pathological circulation of bodily energies as well as the vital soul. Greek medicine inherited these traditions, carrying out the first “mechanization” of ancient ideas which gradually lost their original meaning. Even if Aristotle maintained that the heart was

the seat of mind, Hippocratic medicine embraced a “cerebrocentric” view according to which the brain was the only seat of mind and soul. In Galenic medical system, vital energies were definitively substituted by the “pneuma”, which consisted of the breathing refined in the heart and in the brain, respectively. In the heart it originated the “vital spirit” which regulated emotions and the natural heat of the body, while in the brain it became the “animal spirit” which represented mind and will.

Nevertheless, that the “heart” was not understood in antiquity, represents exactly the main interest for discussing cardiovascular conceptions in ancient time. Even if based on wrong assumptions, ancient medicine paid particular attention to the study of the “pulse”, on which it produced an impressive amount of theories and practices. The fact that the heart was wrongly considered the centre of both emotions and mind, lead ancient physicians to postulate that emotions and thoughts could positively or negatively influence the state and health of the heart and the whole body. In the same way, wrong assumptions on the role of breathing in the production and circulation of spirits and energies, lead ancient medicine, in particular the Ayurveda, to the elaboration of methods of breathing effective not only in curing many medical problems, included heart diseases, but also in maintaining and improving a good health.

Based on new insights on heart-brain connection, current medicine is re-discovering these ancient ideas. From the one hand, most recent neuro-cardiological researches are demonstrating that the heart is, in some way, a highly complex, self-organized information processing centre with its own functional “brain” that communicates with and influences the cranial brain via the nervous system, hormonal system and other pathways. From the other hand, Western cardiologists are applying slow breathing techniques inspired by ancient methods, consisting of a respiratory rate of roughly six breaths per minute, in cardiovascular patients. Several studies show that they immediately lower resting blood pressure and permanently decrease resting blood pressure after several weeks of consistent practice. Breathing methods and relaxation techniques taken from the past are proving to be effective in treating hypertension, reducing angina episodes per week, improving exercise capacity, and decreasing body weight and waist circumference. They can also reduce serum cholesterol and LDL levels. Furthermore, they can decrease the frequency of revascularization, suggesting that they may facilitate regression and prevent progression of atherosclerosis, with a mechanism similar to that of statins. They favourably effects diabetes by increasing insulin sensitivity and decreasing plasma insulin levels.

More in general, Western medicine is rediscovering the strict relationship between heart and brain, to the point that it is possible to speak about a heart-brain system. While depression and anxiety increase the risk of developing cardiovascular disease, cardiovascular disease also increases the risk of developing anxiety and depression. Promoting optimal mental health may be important for both primary and secondary prevention of cardiovascular disease. Like lowering blood pressure, lipids, and body weight, lowering anger and hostility and improving depression and anxiety may also be an important intervention in preventive cardiology.

Therefore, the main interest of ancient theories, could be represented exactly by the central place which they give to the heart in the economy of body structures and functions, as well in emotional and cognitive processes.

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