

HYSTORY OF CARDIORENAL SYNDROME

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OBJECTIVES

As a concept, the cardiorenal syndrome entails the state of the joint damage of the heart and the kidneys, in which the primary damage of one organ leads to the functional and structural changes in the second organ. Interest in the research of the frequency of cardiovascular diseases in the sufferers from primary renal diseases considerably grew with the development of chemodialysis treatment techniques and the introduction of new methods of organ visualizations in the medicine of the eighties during the last century.

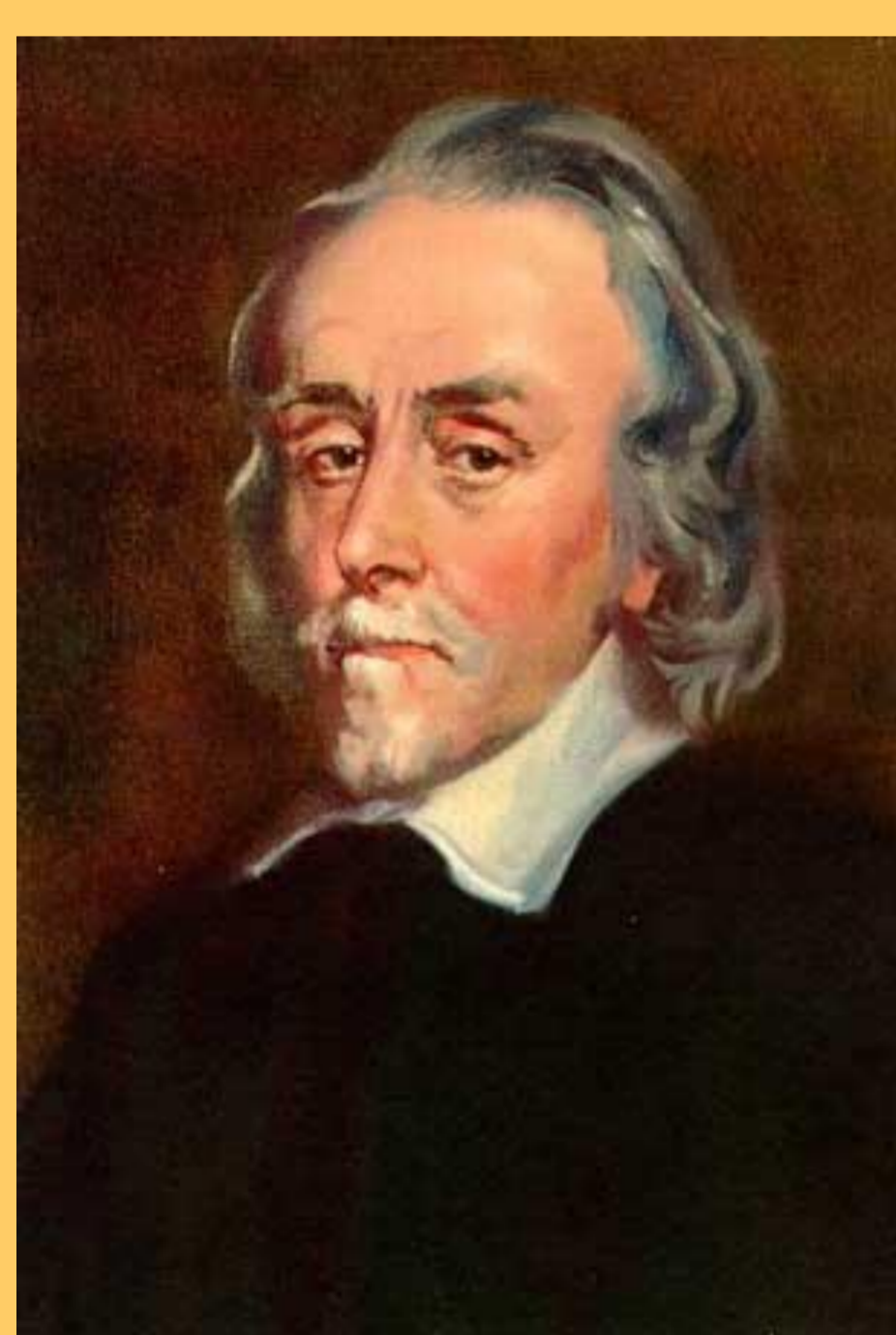
METHODS

Historical data were connected from literature, scientific periodicals, encyclopedias and laboratory data.

RESULTS

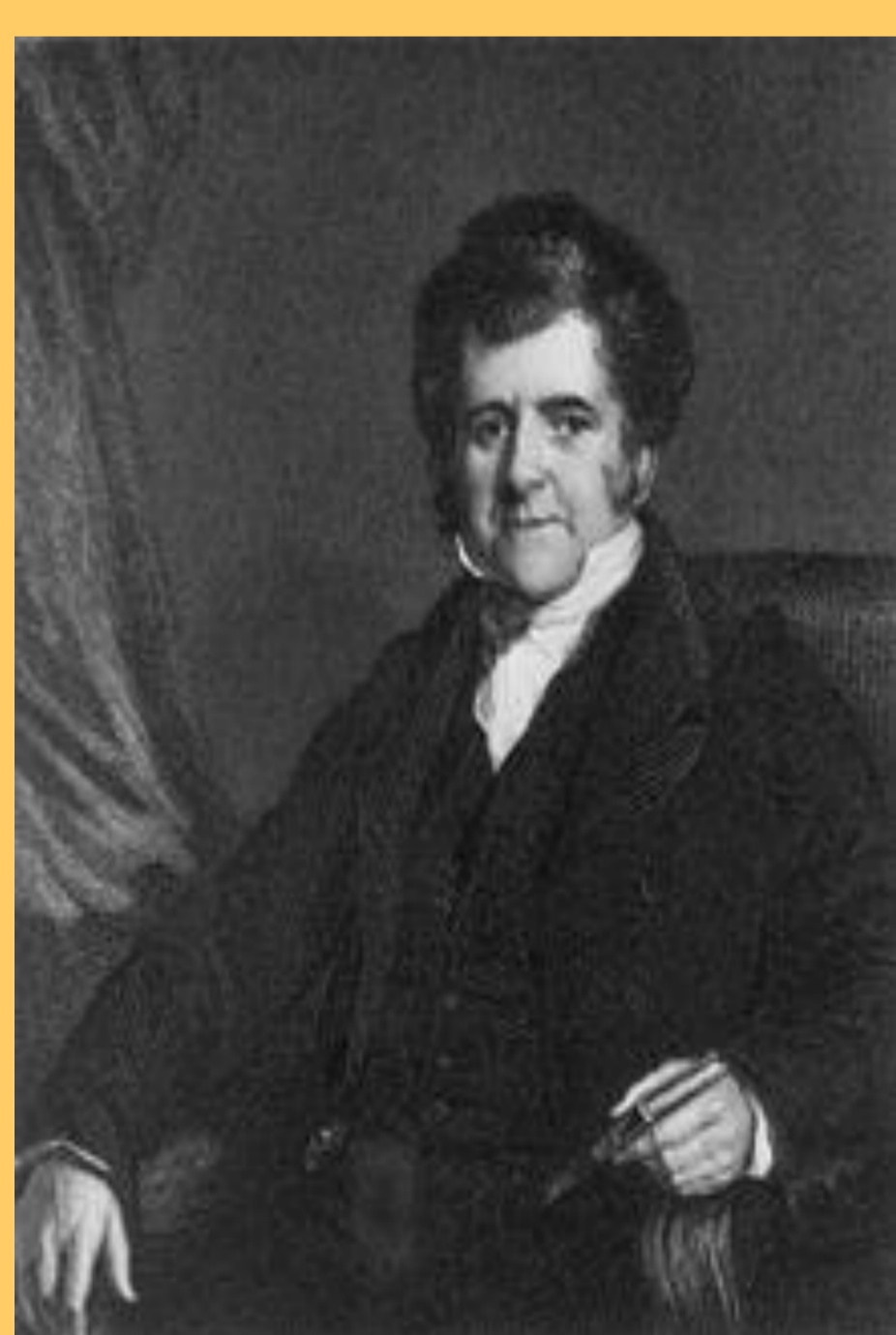


Bust of Gentile from Foligno placed in the Magna Hall of the Faculty of Medicine and Surgery of the University of Perugia



William Harvey (1573-1657)

William Harvey was an English medical doctor. He was the first to explain how blood was moved through the body by the heart. He went to University of Padua where he graduated in 1602.



Richard Bright (1789-1858)

Richard Bright research into the causes and symptoms of kidney disease led to his identifying what became known as Bright's disease. For this, he is considered the "father of nephrology".

The first information concerning the connection between heart disease and the kidneys originates from the fourteenth century, when Gentile di Foligno described that color and secretion of the urine is changed in heart disease and that there is a link between accelerated pulse and urine elimination. Three centuries later, William Harvey published a paper in which he claimed that the kidney and the heart have a mutual role in the regulation of blood pressure. In 1833, Richard Bright noted a connectedness between the occurrence of albuminuria and the hypertrophy of the left ventricle. In his next paper, published three years later, Bright cited that kidney damage could be caused by elevated blood pressure values. It is assumed that the first monograph dedicated to the connectedness of the function between the heart and the kidneys was published in 1856 by his successors, Ludwig Traube and Friedrich Frerich. In 1879, Frederick Akbar Mahomed was the first to describe the vicious circle between the occurrence of hypertension and renal damage.

At Congress XVIII of the Italian Society of Cardiology in 1956, a great deal of interest was sparked by the paper on the changes on the heart in acute glomerulonephritis, and the term "cardiopathia renale" was then introduced into practice. In subsequent papers, instead of the mentioned term, we are faced with the term uremic cardiomyopathy. The earliest records concerning the electrocardiographic changes in the acute heart damage occurring owing to acute renal weakness probably date back to 1961.

The first European gathering devoted to the consideration of problems concerning joint cardiac and renal failure, named Cardioneurology, was held in 1987. This was also the year of the start of intensive research on the causes and effects of the interdependence of functional and structural damage of these two organs, and the main advocate of the idea of the significance and the necessity of the existence of cardioneurology was Professor Mario Timio. Such gatherings signified the beginning of direct cooperation between cardiologists and nephrologists.

CONCLUSIONS

Today, preclinical and clinical examinations emphasize the need for proving and better understanding the connection between the heart and the kidneys, in physiological and pathological conditions, with the aim of prevention and adequate treatment, which would slow down or prevent the potential damage of these organs.

Despite a great number of published papers, there are still a lot of doubts about understanding complex physiological, biochemical and humoral disorders, which are main pathogenic mechanisms in the creation and evolution of cardiorenal damage. This is the origin of the current problem faced by the clinician, i.e. how to diagnose and differentiate between the various modalities of functional and structural changes of these organs?

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