HISTORY OF ELECTROCARDIOLOGY

History of Wolff-Parkinson-White Syndrome: Introductory Note to a Classic Article by Louis Wolff, M.D., John Parkinson, M.D., and Paul D. White, M.D.

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The history of the clinical disorder that we refer to as WPW dates back to 1915 when Frank Wilson published in *The Archives of Internal Medicine* a single case report entitled "A Case in Which the Vagus Influenced the Form of the Ventricular Complex of the Electrocardiogram."¹ This case report was reprinted in the April 2002 issue of the *Annals of Noninvasive Electrocardiology*² together with a brief introductory note regarding this classic article.³

Fifteen years after the Wilson publication, three cardiologists (Drs. Louis Wolff, John Parkinson, and Paul D. White) described 11 cases with intermittent functional bundle branch block, an abnormally short P-R interval, and paroxysms of tachycardia that occurred mostly in healthy young people. The original publication appeared in the August 1930 issue of *The American Heart Journal*⁴ and is republished in its entirety in the reprint that follows this introduction. In reviewing the literature at that time, Wolff et al. acknowledged similar individual cases reported by Wilson in 1915,¹ Wedd in 1921,⁵ and Hamburger in 1929.⁶ What distinguished the publication by Wolff et al. was the aggregation of a series of 11 elegantly described cases, the integration of the findings into a disorder that we now call a syndrome, the appreciation of a triggering role of enhanced vagal activity in some of the cases, the reduction of the paroxysmal tachycardia attacks by quinidine in a few patients, and the long-term benign nature of the disorder in most of the cases.

The historical follow-up is extremely interesting. In 1933, Wolferth and Wood⁷ hypothesized that the accessory auriculoventricular pathway described

by Kent in 1893⁸ might be the substrate for their nine cases as well as the 11 cases reported by Wolff et al. in 1930.⁴ The Kent pathway could permit antegrade preexcitation and retrograde conduction from the ventricle to the atrium allowing a reentrant tachycardia. Dr. White, in the fourth edition of his single-authored book, *Heart Disease* that was published in 1951, refers to the conduction disorder as "An odd electrocardiographic anomaly, probably congenital in origin . . ."⁹ He also described in his book a woman who died suddenly with a paroxysm of atrial fibrillation with a heart rate of approximately 300 beats/min. Furthermore, White appreciated in 1951 that the conduction disturbance was not due to bundle branch block, but rather to rapid conduction of the depolarizing impulse from the atrium to one or the other ventricles as proposed by Wolferth and Wood.⁷ The functional aspects of this reentrant pathway were confirmed by electrophysiological studies in the 1960s with subsequent correction of this disorder by surgical interruption of the pathway, or, as is now done, by catheter-directed radiofrequency ablation.

It is now more than 75 years since the original Wolff-Parkinson-White was published in *The American Heart Journal*. Of note, we have tried on several occasions to contact Elsevier, the current publisher of *The American Heart Journal* and holder of the copyright on the original W-P-W publication, to obtain their permission to republish the W-P-W article, but we have received no response. In the absence of any negative response from Elsevier, we took the liberty of republishing the original article by Drs. Wolff, Parkinson, and White.⁴

REFERENCES

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