

This Week's Citation Classic

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Hancock E W & Cohn K. The syndrome associated with midsystolic click and late systolic murmur. *Amer. J. Med.* 41:183-96, 1966.
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Clinical analysis of 40 patients with mid-systolic clicks, with or without associated late systolic murmur, showed that the associated features of unexplained chest pain and dyspnea, cardiac arrhythmias with potential for sudden cardiac death, familial occurrence, and the presence of other congenital anomalies indicate a somewhat characteristic syndrome which was not previously well delineated, although not rare. [The SCJ® indicates that this paper has been cited in over 230 publications since 1966.]

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"As a young faculty member in cardiology at Stanford University in the early 1960s, I was interested in the mid-systolic click, because of my previous work on the ejection click and because of evidence then becoming available that the mid-systolic click was probably mitral valvular in origin rather than pericardial, as had been believed by most authorities before 1960. Aided by the excellent facilities for phonocardiography that Herbert Hultgren had developed at Stanford, I began to assemble a list of patients with what I called the 'mitral-pericardial syndrome.'

"In 1965, I was visited by Norman Sissman, our pediatric cardiologist, to discuss a child he was seeing with mid-systolic click and late systolic murmur. The patient's mother, whom I had seen previously for palpitation due to multiple ventricular premature beats associated with mid-systolic click and late systolic murmur, had recently dropped

dead suddenly; there was naturally a great concern about finding the same auscultatory findings in the eight-year-old child. This was my first indication that the mid-systolic click might be more important than an auscultatory curiosity. In addition, the familial occurrence seemed to be a new observation. I encouraged Keith Cohn, a fellow in cardiology, to review our collected cases to see whether any sense could be made of it. This review showed such a high prevalence of premature beats and other arrhythmias, along with other features, that we thought it was justified to describe this as a syndrome.

"The publication of our paper was not initially met with much more than polite interest. Indeed, Cohn seemed to have some reluctance to announce a new syndrome, as he felt that I should be the first author even though he had done most of the data collection and analysis. However, the concept of a click-murmur syndrome (later redefined as mitral valve prolapse after the introduction of echocardiography) was very quickly accepted, and a burgeoning literature on the subject soon developed and continues to the present.¹ In essence, a new and perhaps the most frequent form of valvular heart disease had been discovered.

"I think our paper has been frequently quoted because it was the earliest broad synthesis of previously scattered observations into the concept of a new and important cardiologic syndrome. The descriptions of 1966 remain generally valid, despite the many additions later and the much continuing controversy about many aspects of this problem.

"Incidentally, the eight-year-old girl of 1965 is now a healthy young adult, and has never had any significant arrhythmia, although the click and murmur have persisted."

1. Gravanis M B & Campbell W G, Jr. The syndrome of prolapse of the mitral valve: an etiologic and pathogenic enigma. *Arch. Pathol. Lab. Med.* 106:369-74, 1982.