

Abstract:

Intracavitary electrocardiography is an accurate and non-invasive method for central venous access tip location. Using the catheter as a traveling intracavitary electrode, intracavitary electrocardiography is based on the increase in the detected amplitude of the P wave while approaching the cavoatrial junction. Despite having been adopted diffusely in clinical practice only in the last years, this method is not novel. In fact, it has first been described in the late 40s, during electrophysiological studies. After a long period of quiescence, it is in the last two decades of the XX century that intracavitary electrocardiography became popular as an effective mean of central venous catheters tip location. But the golden age of this technique began with the new millennium, as documented by high-quality studies in this period. In fact, in those years, intracavitary electrocardiography has been studied broadly, and important achievements in terms of comprehension of the technique, accuracy, and feasibility of the method in different populations and conditions (i.e. pediatrics, renal patients, atrial fibrillation) have been gained. In this review, we describe the technique, its history, and its current perspectives.

Reference:

Pittiruti, M., Pelagatti, F. and Pinelli, F. (2020) Intracavitary electrocardiography for tip location during central venous catheterization: A narrative review of 70 years of clinical studies. *The Journal of Vascular Access*. June 24th.
<https://doi.org/10.1177/1129729820929835>. (epub ahead of print).