

# Congenital coronary artery fistulas in adult population: is there a need for a European Community registry?

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## RELATED ARTICLE

by Podolec et al,  
see p. 1034

The incidence of anomalies in the coronary arteries generally varies between 0.3% and 1.6%. They are subdivided into anomalies of origin, pathway, and termination. Congenital coronary artery fistulas (CAFs), reported for the first time as early as in 1865 by a German anatomist, Krause,<sup>1</sup> constitute a special subgroup and are classified as anomalies of termination.

Congenital coronary artery fistulas are infrequent and may be found incidentally, but they are increasingly reported due to the widespread use of several noninvasive and invasive diagnostic modalities.

Diagnostic modalities for assessment of anatomical characteristics and functional relevance of CAFs are numerous, including transthoracic and transesophageal echocardiography,<sup>2</sup> stress single-photon emission computed tomography myocardial perfusion imaging,<sup>3,4</sup> computed tomography coronary angiography (CTCA),<sup>5</sup> and cardiovascular magnetic resonance imaging.<sup>6</sup> There are also invasive techniques such as conventional coronary angiography,<sup>7</sup> intravascular ultrasound,<sup>8,9</sup> and fractional flow reserve.<sup>10</sup>

Conventional coronary angiography remains the gold standard for detecting CAFs. In recent years, with the application of CTCA, an increasing number of CAFs are being detected and reported.<sup>11</sup>

In this issue of *Kardiologia Polska* (*Kardiol Pol*, *Polish Heart Journal*), Podolec et al<sup>12</sup> reported on the conventional coronary angiographic registry that included patients hospitalized in invasive cardiology departments in Poland between January 2014 and December 2016. They found CAFs in 261 (0.087%) out of 298 558 patients, which correlated with the incidence reported in other studies on series of coronary angiography

(0.08%)<sup>13</sup> and CTCA (0.089%).<sup>5</sup> The study by Podolec et al<sup>12</sup> is one of the largest reported registries on CAFs. In their work, they found that the left anterior descending coronary artery was the most frequent fistula-related artery (167; 59.2%), which was in contrast to previously published reports,<sup>14</sup> but in agreement with the findings of Sercelik et al<sup>13</sup> and Chiu et al.<sup>15</sup> Furthermore, they found that the pulmonary artery was the most frequent site of termination of the fistulas. Of the 261 patients with CAFs, fistulas were more frequent in women (0.12%) than men (0.07%) and patients with CAFs had lower body mass index. Several issues still require further investigation, for example, the association between chronic obstructive pulmonary disease and congenital CAFs and higher occurrence rates in women in the current registry. It is worthwhile to encourage the authors to consider reporting the management of patients with symptomatic and asymptomatic (silent) CAFs in the registry.

All these findings regarding congenital CAFs in adults raise the need for a larger prospective multicenter international registry across all members states of the European Community (ie, Euro-CAF Registry). Collaboration among researchers, scientists, and investigators is required to seek a funding source to initiate such a registry.

## ARTICLE INFORMATION

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