Cryptogenic stroke

A cryptogenic stroke refers to a type of stroke where the exact cause cannot be determined despite thorough medical evaluation. In many cases, strokes are attributed to known risk factors such as high blood pressure, atrial fibrillation (an irregular heart rhythm), diabetes, or atherosclerosis. However, in some instances, despite extensive diagnostic tests, the cause of the stroke remains unidentified, leading to the classification of “cryptogenic.”

Several factors can contribute to the classification of a stroke as cryptogenic:

Inadequate diagnostic information: Despite comprehensive medical assessments, some strokes may not have a clearly identifiable cause due to limitations in available diagnostic tools or the absence of evident risk factors.

Embolic strokes of undetermined source (ESUS): This is a subtype of cryptogenic stroke where the stroke is presumed to be embolic (caused by a clot), but the source of the embolism cannot be identified despite thorough investigation.

Paradoxical embolism: In some cases, a clot may form in the veins (such as a deep vein thrombosis) and then travel to the arterial circulation, causing a stroke. This can occur through a passage known as a patent foramen ovale (PFO), a small opening between the atria of the heart that is present in some individuals. Identifying this mechanism can be challenging.

Limited observation time: In some cases, the underlying cause of a stroke may become apparent over time as additional symptoms or risk factors emerge.

Management of cryptogenic strokes often involves treating underlying risk factors, such as hypertension, diabetes, or dyslipidemia. Anticoagulant medications may be considered, especially if the stroke is presumed to be embolic in nature or if there is evidence of a cardiac source.

It's important for individuals who have experienced a cryptogenic stroke to work closely with their healthcare team to manage risk factors and receive appropriate preventive treatments to reduce the risk of future strokes. Ongoing research is aimed at improving our understanding of cryptogenic strokes and developing more effective diagnostic and treatment strategies.

One-third of the ischemic strokes is cryptogenic.

Todo et al. retrospectively analyzed a database of 66 consecutive patients with cryptogenic stroke who received ICM implantation between October 2016 and March 2018 at 5 stroke centers. We included the follow-up data until June 2018 in this analysis. We defined frequent PACs as the upper quartile of the 66 patients. We analyzed the association of frequent PACs with AF detected by ICM.

Frequent PACs were defined as >222 PACs per 24-h period. The proportion of patients with newly detected AF by ICM was higher in patients with frequent PACs than those without (50% [8/16] vs. 22% [11/50], $p < 0.05$). Frequent PACs were associated with AF detection and time to the first AF after adjustment for CHADS2 score after index stroke, high plasma -B-type natriuretic peptide (BNP; >100 pg/mL) or serum -N-terminal pro-BNP levels (>300 pg/mL), and large left atrial diameter (≥45 mm).

High frequency of premature atrial contractions (PAC) in cryptogenic stroke may be a strong predictor

of atrial fibrillation (AF) detected by insertable cardiac monitoring (ICM). [1].

1)
Todo K, Iwata T, Doijiri R, Yamagami H, Morimoto M, Hashimoto T, Sonoda K, Yamazaki H, Junpei K, Okazaki S, Sasaki T, Mochizuki H. Frequent Premature Atrial Contractions in Cryptogenic Stroke Predict Atrial Fibrillation Detection with Insertable Cardiac Monitoring. Cerebrovasc Dis. 2020 Feb 5:1-7. doi: 10.1159/000505958. [Epub ahead of print] PubMed PMID: 32023609.