Unusual cause of acquired RBBB

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DESCRIPTION

A 34-year-old woman presented with a 3-day history of atypical chest pain. There were no risk factors for coronary artery disease. ECG showed right bundle branch block (RBBB) with normal

sinus rhythm (figure 1). Troponin T test was positive according to reference laboratory standards. Echocardiogram (transthoracic) showed no regional wall motion abnormality with normal left ventricle (LV) ejection fraction (videos 1 and 2). Coronary

Figure 1 Twelve-lead ECG showing normal sinus rhythm with right bundle branch block.

Figure 2 Right anterior oblique cranial view of the left system angiogram showing occluded septal artery with insignificant plaquing in left anterior descending.

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Figure 3 Right anterior oblique carnial view of the left system angiogram showing occluded septal artery with type II left anterior descending coronary artery.

Figure 4 Left anterior oblique view of the right system angiogram showing normal dominant right coronary artery.

angiogram showed isolated occlusion of septal artery with insignificant disease in left anterior descending (LAD; figures 2 and 3; video 3). Left-circumflex artery and right coronary artery were normal (figure 4; videos 4 and 5).

We represent a case of isolated occlusion of septal artery manifesting as NSTEMI with RBBB on electrocardiogram. Only a few case reports are there for isolated occlusion of septal

artery.^{1 2} Although the existence of qRBBB on ECG is taken seriously by every cardiologist and physician, our case shows the importance of isolated RBBB with no 'q' waves which is generally a neglected phenomenon on ECG. Isolated RBBB on ECG can show isolated occlusion of septal artery which is rare. Septal artery occlusion can also manifest with complete heart block.³ Our patient is on optimal medical management and doing well.

Video 1 Parasternal short axis view in transthoracic echocardiogram showing normal LV ejection fraction with no regional wall motion abnormality.

Video 2 Apical 4 chamber view in transthoracic echocardiogram showing normal LV ejection fraction with no regional wall motion abnormality.

Video 3 Right anterior oblique cranial view of left system angiogram showing occluded septal artery with insignificant plaquing in LAD.

Video 4 Right anterior oblique caudal view nondominant normal LCX.

Video 5 Left anterior oblique view of right system angiogram showing normal dominant RCA.

Learning points

- ▶ Isolated occlusion of septal artery in coronary angiogram is rare without significant involvement of left anterior descending.
- ▶ Right bundle branch block on 12-lead ECG can be an isolated manifestation of isolated septal artery occlusion.
- ▶ Patient presenting with acute coronary syndrome with RBBB should be taken as seriously as qRBBB and substantiated with cardiac biomarkers.

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Competing interests None.

Patient consent Obtained.

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