中文題目：Gerbode 室間隔缺損在影像學的表現-病例報告

英文題目：Image findings of Garbode defect-Case report

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Background:

Gerbode defect is a rare condition which causes abnormal septal defect between the left ventricle (LV) and right atrium (RA). The defect is considered a congenital disease and usually found in the children. Nevertheless, the recent reviews and care reports showed that the adult might have the defect due to the advanced diagnostic tools. In this report, we would present a case of Gerbode defect in terms of the image findings of echocardiography and magnetic resonance imaging.

Case Report:

This 58-year-old male has the underlying diseases of ventricular septal defect, pulmonary hypertension, severe tricuspid regurgitation, congestive heart failure, atrial fibrillation, and colon adenocarcinoma status post left hemicolectomy on 02 January of 2020. He presented at our emergency department due to a progressive exertion dyspnea for one week. The physical examinations showed a clear consciousness, tachycardia (114 beats/min), tachypnea (20 times/minute), hypertension (168/105 mmHg), and moderate edema at bilateral lower extremities and scrotal edema. Jugular engorgement and systolic thrill along the sternal border were observed. Besides, a loud holosystolic heart murmur was heard at the left lower sternal border.

Electrocardiogram revealed atrial fibrillation with a rapid ventricular response. Chest X-ray film disclosed cardiomegaly and pulmonary congestion. The N-terminal pro-brain natriuretic peptide (NT-proBNP) elevated by 866.8 pg/ml. The transthoracic echocardiogram showed adequate LV systolic function, dilated RA and right ventricle (RV), severe tricuspid regurgitation, high pulmonary artery systolic pressure, and an intracardiac shunt suspiciously from LV to RA. (Maximum length of the defect: 1.4cm). Right heart catheterization was arranged for a pulmonary hypertension survey,

where an intracardiac shunt from LV to RV was suspected. The finding was against the thoracic echocardiography. Therefore, the following transesophageal echocardiography and cardiac magnetic resonance imaging were arranged. The transesophageal echocardiogram showed one intracardiac shunt from LV to RA (the defect : 1cm*1.5cm). Likewise, the magnetic resonance imaging showed an LV-RA defect approximately 15mm in diameter, accompanied by the low position of the septal leaflet of the tricuspid valve. According to the image findings, a Gerbode defect (an intracardiac shunt from LV to RA), accompanied by severe tricuspid regurgitation and severe pulmonary hypertension were found. With diuretics, his symptoms was improved. Subsequently, he was scheduled to arrange ventricular septal defect closure by the surgery.

Conclusion:

Gerbode defect is sometimes misinterpreted as mitral/ tricuspid regurgitation, pulmonary hypertension, valsalva aneurysm rupture, and perimembranous ventricular septal defect. Clinically, given an atypical jet direction of intracardiac shunt on transthoracic echocardiography, transesophageal echocardiography and cardiac magnetic resonance imaging may play important diagnostic tools.

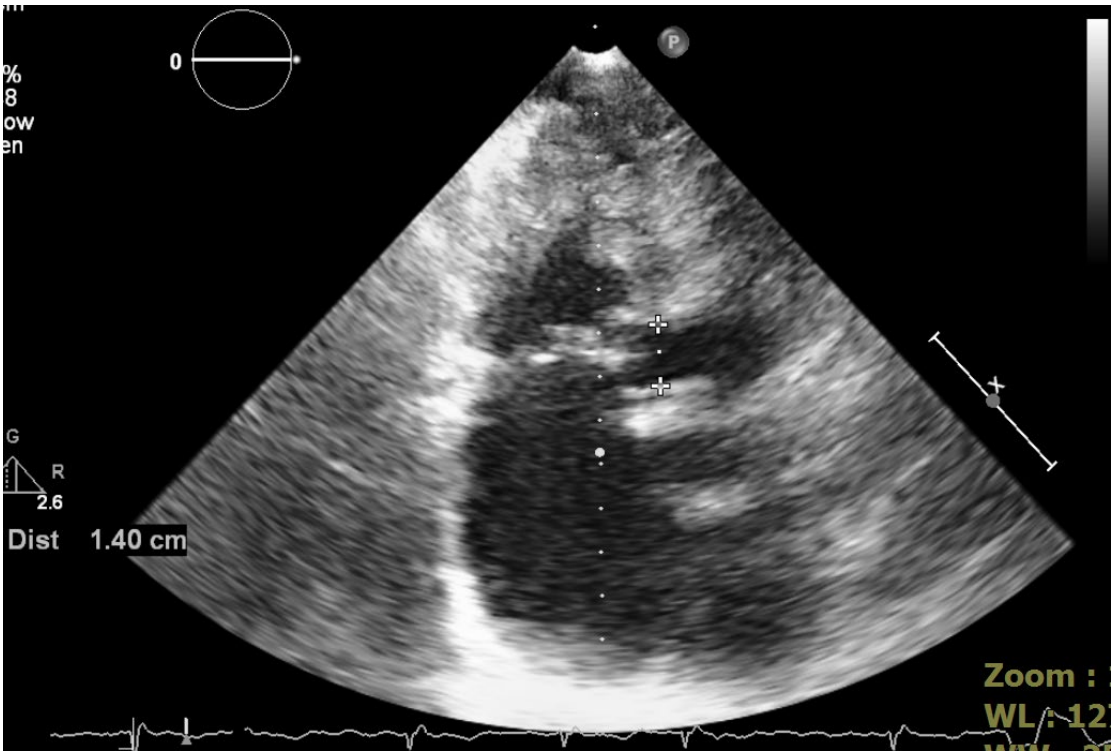

Figure 1.

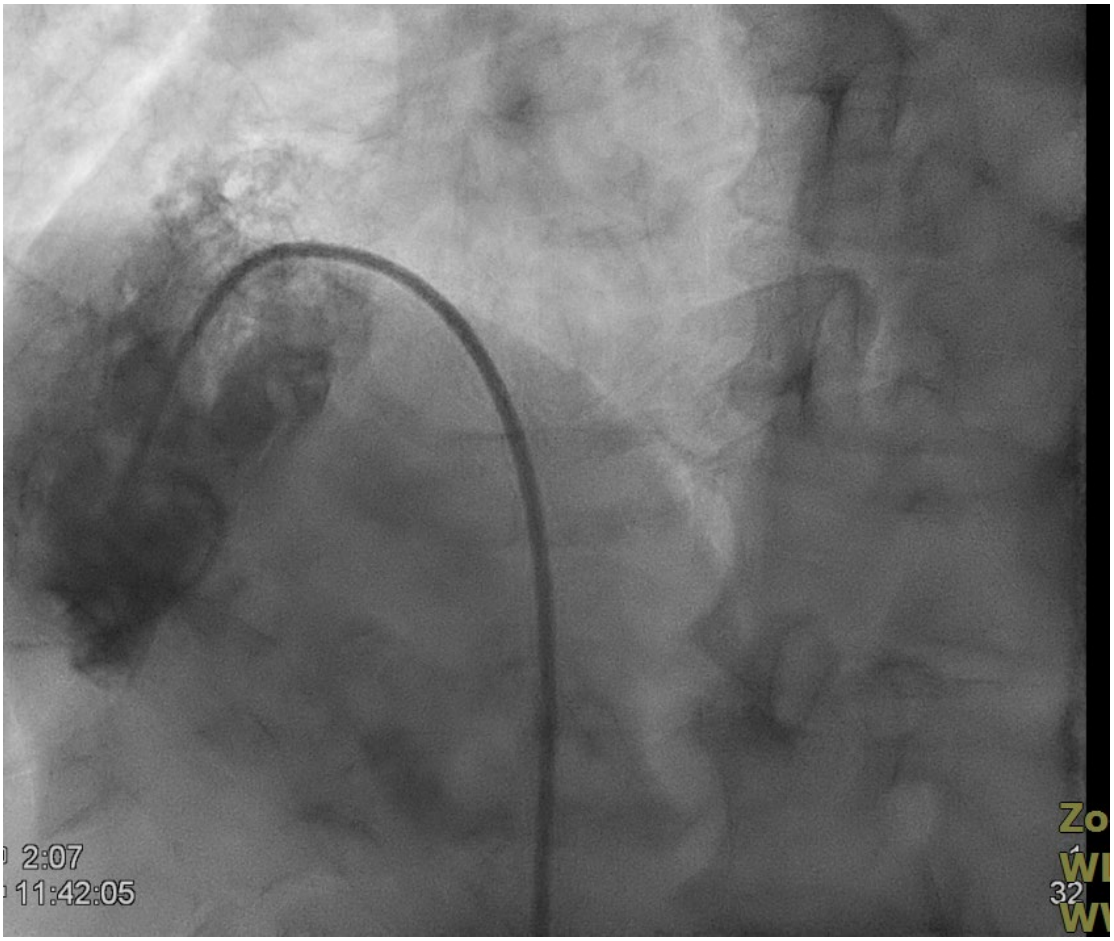

Figure 2

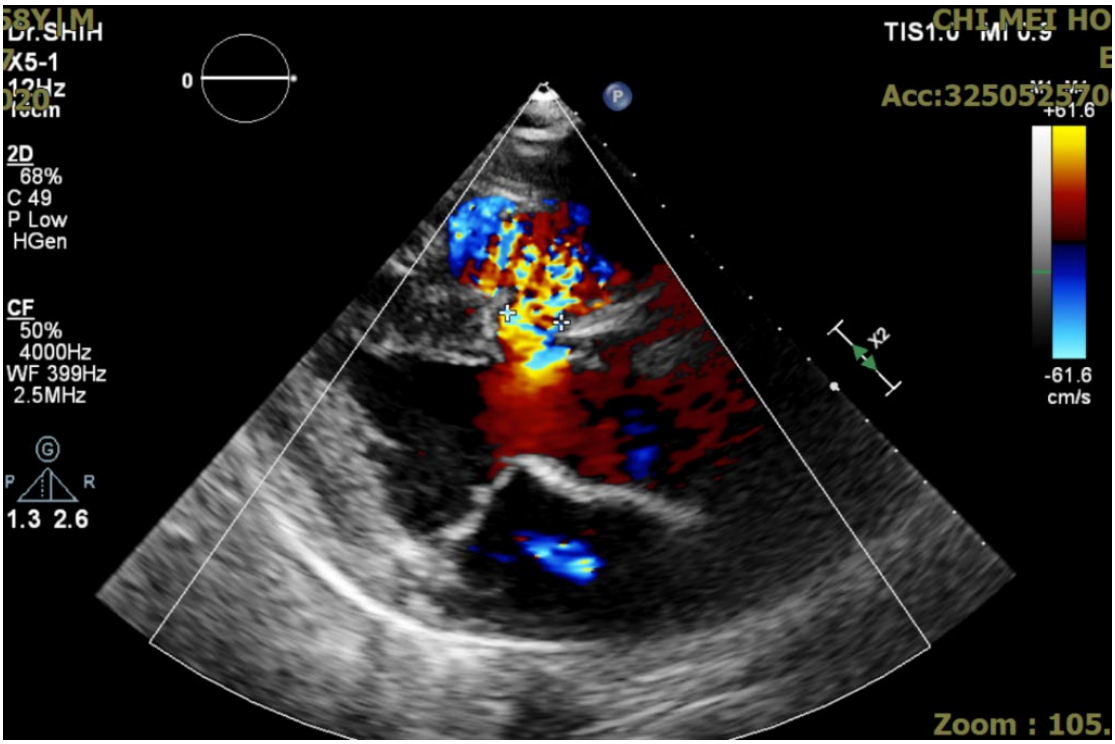
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Figure 3

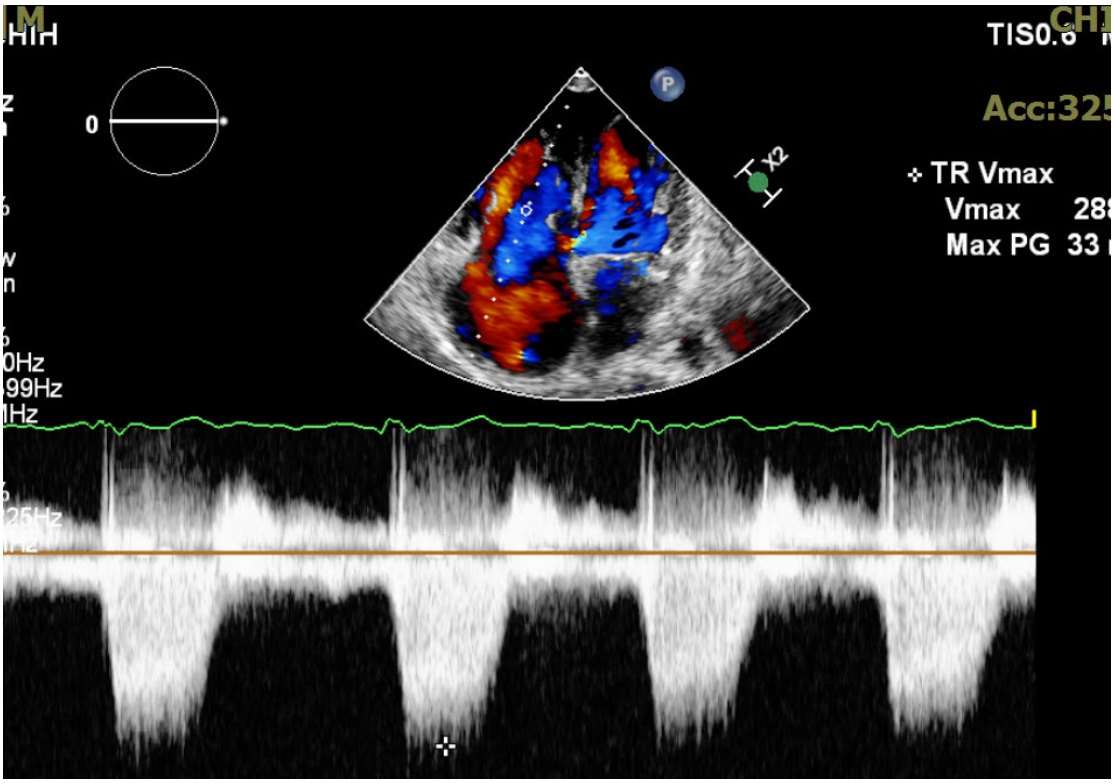

Figure 4

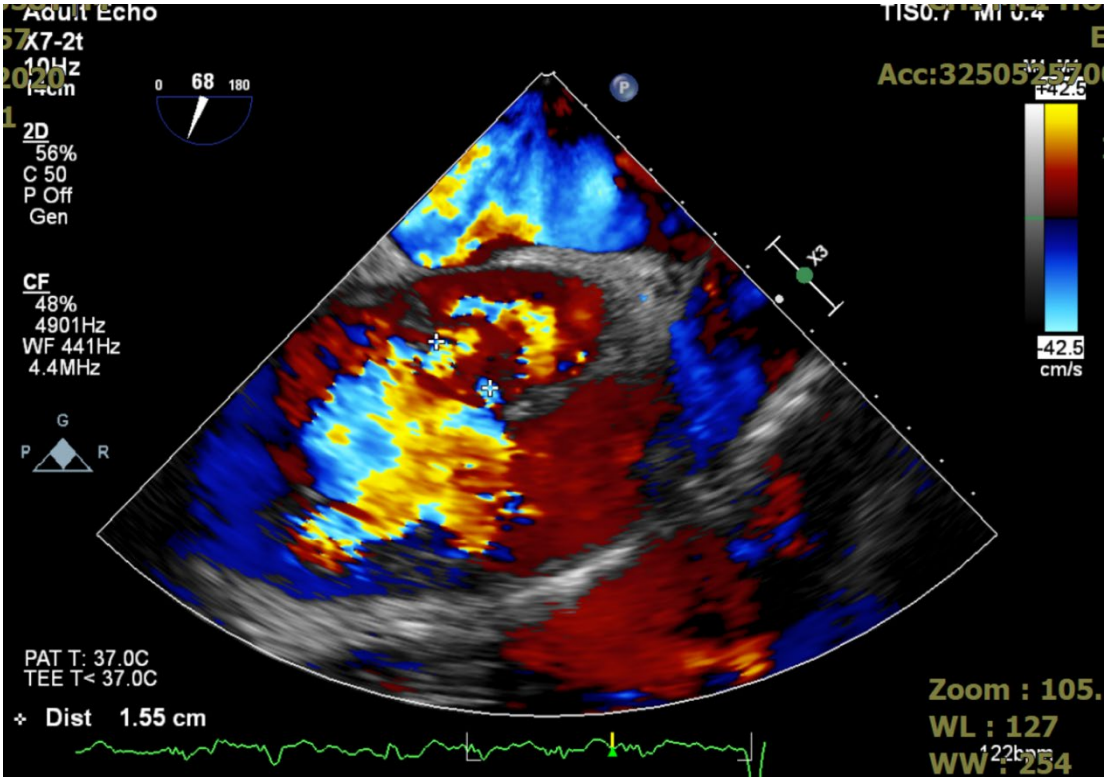
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Figure 5

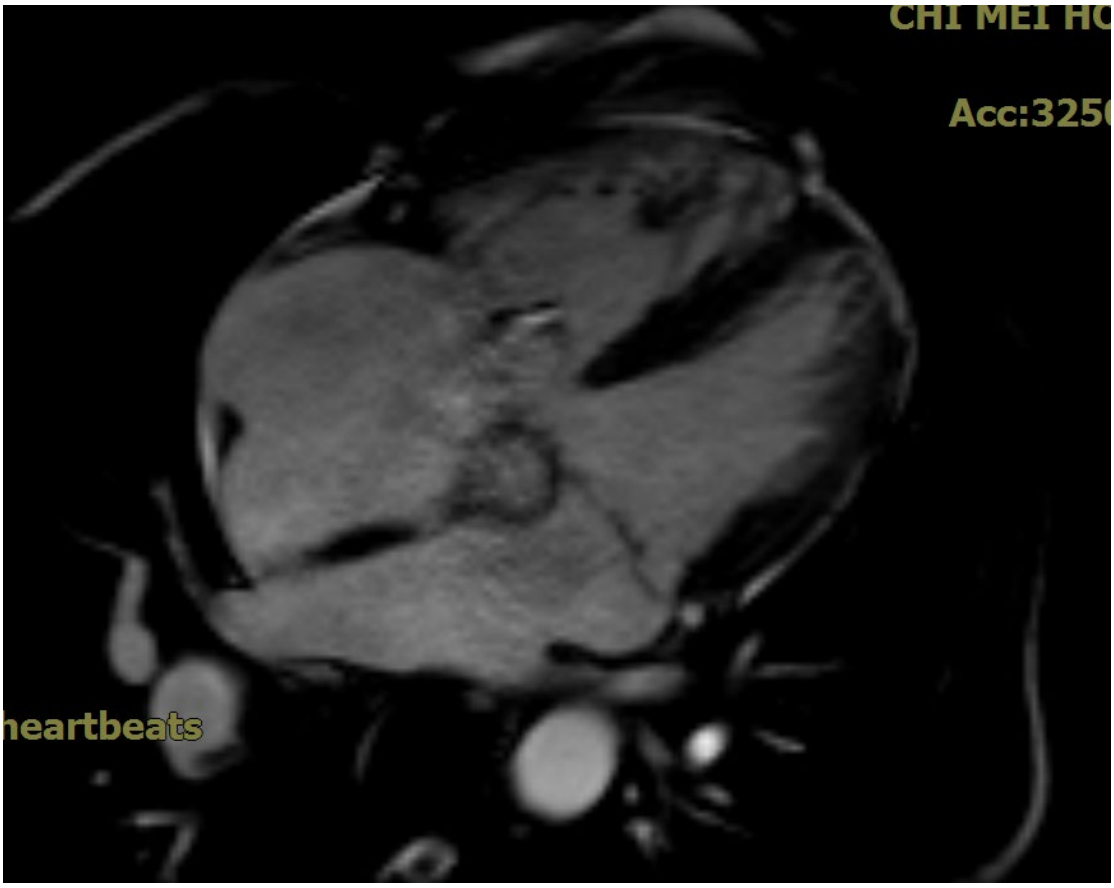

Figure 6

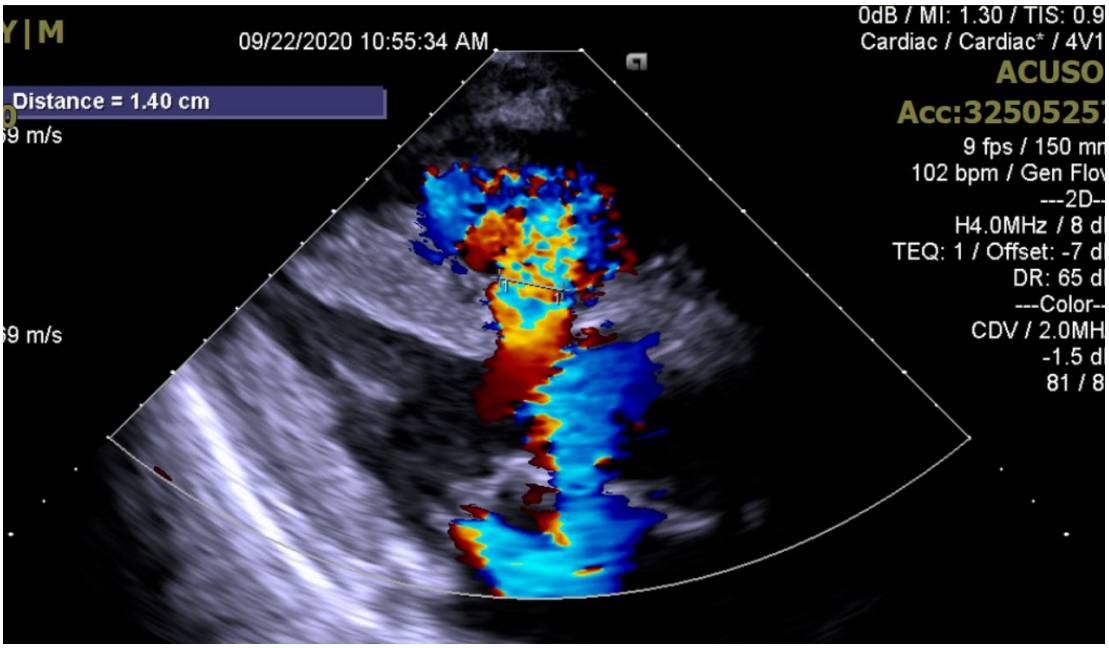
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Figure 7