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### **A case of coronary-pulmonary artery fistula presenting with dyspnea in patient on hemodialysis**

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**Case Study:** Dyspnea is one of the most common symptoms in hemodialysis patients. Although there are various causes, Coronary-pulmonary arterial fistula is a rare vessel anomaly that can cause dyspnea, atypical chest pain and myocardial steal which can result in heart failure and myocardial infarction. It is frequently due to congenital cause, but can be acquired due to cardiac surgery, endomyocardial biopsy, radiation therapy or penetrating blunt trauma. We report a case of dyspnea associated with coronary-pulmonary artery fistula in patient with hemodialysis.

Case : A 74-year-old woman admitted for suffering from dyspnea. She was diagnosed with thin basement membrane disease with FSGS in 2006 and had been on hemodialysis since 2018. On 1<sup>st</sup> admission day, blood pressure was 162/94mmHg, heart rate was 94 beats/min, and body temperature was 36.6. Laboratory findings revealed hemoglobin 9.9g/dL, WBC count 2,940cells/u, platelets 134,000cells/uL, BUN/Cr 25.4/4.16mg/dL, and albumin 4.6g/dL. Urine microscopy showed proteinuria 3+, and chest x-ray showed both pleural effusion with cardiomegaly. Body weight was 43.0kg, and BCM at that time showed dry weight of 42.0kg, showing no severe over-hydration. To improve pleural effusion and dyspnea, hemodialysis was adjusted according to dry weight, but there was little improvement. On the EKG, ST depression and T wave inversion were newly developed in V4-6 lead which were normal in EKG taken 7 months earlier. On 4<sup>th</sup> admission day, transcardiac echocardiogram showed global hypokinesia in left ventricle and decreased ejection fraction(55%→40%). On 5<sup>th</sup> admission day, coronary angiography was performed to evaluate coronary ischemia and it showed large coronary-pulmonary artery fistula arising from pLAD into main pulmonary trunk. On 12<sup>th</sup> admission day, repair surgery of coronary-pulmonary artery fistula was done by the cardio-thoracic surgeon. On 22<sup>th</sup> admission day, dyspnea has improved, so the patient was discharged and is currently under follow-up on outpatient basis.

KSN2023 case report figure