

Prevalence of Polyvascular Disease in Korea: 10-year Korea Health Insurance Sample Cohort Database

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Background: Nationwide epidemiologic data about of polyvascular disease in Korea are limited. **Methods:** Using the 10-year Korea Health Insurance Sample Cohort Database (KHISCDB), we performed a nationwide population-based epidemiologic study and investigated the prevalence of polyvascular disease including coronary artery disease (CAD), peripheral artery disease (PAD) and cerebrovascular disease (CVD). **Results:** A total of 1,025,340 people were screened from KHISCDB and 670,439 adult people were followed up from 2002 to 2010 (Fig A). A total of 94,984 (14.2%) patients were diagnosed as ASCVD: 56,185 patients as CAD, 49,608 patients as PAD and 28,594 patients as CVD. Of these patients, 63,014 patients (6.3%) have single arterial bed disease and 31,970 patients (33.7%) have polyvascular disease. 48.2% of the 56,185 patients with CAD, 52.2% of the 49,608 patients with PAD, and 64.4% of the 28,594 patients also have other ASCVD in other arterial territories (Fig B). **Conclusions:** The prevalence of polyvascular disease in Korea was higher than that of Western countries or worldwide data. This nationwide epidemiologic study offers an opportunity to provide to a better understanding of the prevalence of polyvascular disease in Korean populations and results of the study will be of practical relevance to physicians, health care organizations, and those who issue clinical guidelines for the reduction of ASCVD.

Fig A.

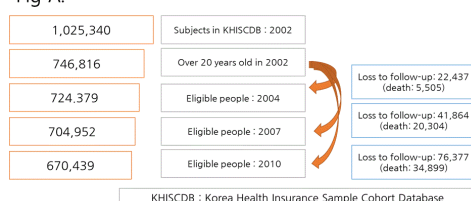
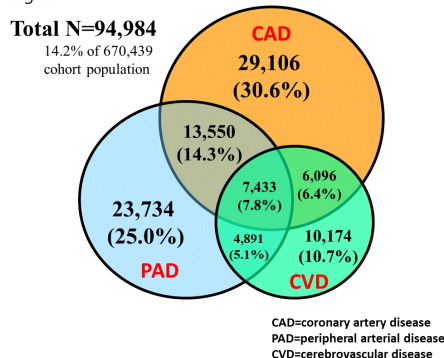


Fig B.



Successful removal of embolized chemoport catheter within the heart and pericardium: 3 Case reports

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Central venous access devices are routinely used in oncology for delivering chemotherapy. However, intracardiac and pericardial foreign bodies are rare complication. Immediate removal of foreign body is essential for prevention of catastrophic complications. Herein we experienced three cases of patients, two of them who suffered from fractured chemoport catheters migrated to intracardiac space, rest of them who went through longlasting asymptomatic period and incidently found to have fractured chemoport catheter in pericardium. Patient A (66-year old man with NSCLC) and B (68-year old man with NSCLC) experienced chemoport catheter fracture and embolization to intra-cardiac chamber with no significant symptoms. With goose-neck snare technique (AMPLATZ, 4.0 Fr, EV3 Inc. 4600 Nathan Lane North Plymouth, MN USA) under fluoroscopy, their fragmented catheters easily were removed with no eventful complications. But in patient C (69-year old man with rectal cancer), percutaneous intracatheter removal procedure under fluoroscopy was failed due to unaccessability. Chest CT, echocardiography and 3D cardiac CT reveals fragmented chemoport catheter was located in pericardial space. Also, it was removed by pericardiotomy without complications.

Table 1. Summary of patient characteristics and procedures

Case No.	Age, yr. (Sex)	Diagnosis	Type of foreign body and location	Previous procedure	Associated sx.	Retention time	Retrieval method	Elapsed time	Length of migrated piece	Result	Complications
1	66(M)	NSCLC	Chemoport catheter RPA-LPA	Rt. Intrajugular chemoport insertion	No	13 months	Percutaneous intracatheter Snare technique	12 min.	9 cm	Good	No
2	68(M)	NSCLC	Chemoport catheter RA-RV-LPA	Rt. Intrajugular chemoport insertion	No	2 months	Percutaneous intracatheter Snare technique	15 min	15 cm	Good	No
3	69(M)	Rectal cancer	Chemoport catheter Pericardium	Rt. Intrajugular chemoport insertion	No	8 years	Pericardiotomy	50 min	14 cm	Good	No

Abbreviation : RPA - right pulmonary artery, LPA- left pulmonary artery, RA - right atrium, RV - right ventricle



Figure 1
The chest x-ray of patient A (66-year old man with NSCLC) showed radio-opaque foreign body lied between both pulmonary artery trunk.(A,B) The chest x-ray of patient B (68-year old man with NSCLC) also demonstrated intra-cardiac fragmented chemoport catheter lied in right atrium to left pulmonary artery trunk.(C) 3days later, elective percutaneous intracatheter retrieval of foreign body was carried out for patient B under fluoroscopy with snare technique.(C,D,E) There was no eventful complications during and after procedure.

Figure 2
The chest x-ray of patient C (69-year old man with rectal cancer) who inserted chemoport 8 years ago showed radio-opaque foreign body lied in inferior border of heart.(A,B) Percutaneous intracatheter removal procedure under fluoroscopy was failed due to unaccessability. Then chest CT reveals fragmented chemoport catheter to be lied in pericardial space.(C) 3D cardiac CT showed more definite position and length of fragmented catheter in pericardium.(D,E,F) The embolized catheter was removed through elective pericardiotomy with ease. There was no adhesion or effusion in intraoperative procedure.