



STUDY FOR PREVALENCE OF PERIPHERAL VASCULAR DISEASES BY SCREENING TEST FOR OLD MALE POPULATION: PRELIMINARY RESULTS

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Disclosure



- Clinical Research with Cordis and Medtronic





Background

Prevalence for old population(>65 year old)
in Western Countries

Carotid Artery Disease(>50%) : 5-7%

AAA(>3cm) : 4-8% for old men,

0.5-1.5% for old women

PAOD(ABI <0.9, <0.6) : 3-10%

up to 20% in 70 year old

Background : AAA Repair



	Korea	Japan	US
General Population	50 x 10⁶	130 x 10⁶	300 x 10⁶
Old Age Population	10%(5 x 10⁶)	20%(26 x 10⁶)	20%(60 x 10⁶)
GNP/person	20,000\$	35,000\$	44,000\$
Vascular Surgeons	200	3000	3000
Screening Program	NO	NO	YES
Annual AAA Volume	200-600	7000	20,000

Background

		2004	2005	2006	2007	2008
	AAA OR	178	249	272	275	408
AA	EVAR	16	31	70	126	204
EV	Total	194	280	340	401	612
Total		106	200	242	283	

AAA OR : AAA open repair

EVAR : Endovascular Aneurysm Repair

2005, KSVS. Kim et al

2009, 심평원 의뢰자료(HIRA)



Trend in Change of Population, Korea

	1990	1997	2000	2006	2007	2010	2016	2018	2026
GP	42,8	45,9	47,0	48,7	48,4	48,8	49,3	49,3	49,0
> 65	2,1	2,9	3,3	4,5	4,8	5,3	6,5	7,0	10,2
%	5.1	6.4	7.2	9.5	9.9	11.0	13.4	14.3	20.8

Classification of old age group(UN)

- 고령화사회 (aging society) : 전체인구 중 65세 이상 인구비율이 7%이상~14%미만인 사회
- 고령사회 (aged society) : 전체인구 중 65세 이상 인구비율이 14%이상~20%미만인 사회
- 초고령사회 (super-aged society) : 전체인구 중 65세 이상 인구비율이 20%이상인 사회

2007년 고령자 통계, 통계청

Background



- Possible Reasons for Low Volume of AAA in Korea
 1. Low Prevalence of AAA (?) : Few Reports.
 2. Proportion of Old Age Group : Low
 3. Few Screening Tools
 4. Few Doctors for This Field
 5. Less Support from Government for Vascular Disease
 6. Low Socioeconomic Status in Old Age Group
 7. Beginning period of Endovascular treatment



Purpose

- To Find Out the Prevalence of Carotid Artery Stenosis, AAA and PAOD in Korea
- To Find Out the Characteristics of Peripheral Vascular Disease in Korea



Methods

- Inclusion : The male volunteer more than 65 year old
**Senior's House Association, Public Health Center,
Broadcast Media**
- Exclusion : follow up patient with known vascular disease
- Sample Size = 1500 - 2000

$$n = \left(\frac{Z_{\alpha/2} \cdot \hat{\sigma}}{d} \right)^2$$

Methods



- Questionnaires about general health problems
- Duplex Scan : Medison Accuvix V10, GE P5

- ABI : VP-1000



- Carotid Artery Stenosis : 30%, 50% stenosis
- Abdominal Aortic Aneurysm and Iliac artery Aneurysm :
AAA >3cm, 5>cm, IAA >2cm, >3cm
- PAOD : Ankle Brachial Index : ABI <0.9, <0.6

Results : Demographics



Age	700 N(%)
65-69	163 (23.3%)
70-74	267 (38.1%)
75-79	171 (24.4%)
80-84	78 (11.1%)
85-89	17 (2.4%)



Results : Demographics

	N(%)
Previous Screening for General Health	597(85.3%)
Previous Screening for Peripheral Vascular Diseases	98 (14.0%)
Diabetes Mellitus	81 (11.6%)
Hypertension	373(53.3%)
Heart disease	95 (13.6%)
Hypercholesterolemia	118(16.9%)
Smoking(current/ ex-smoking)	157(22.4%)/350(50.0%)



Results : Carotid Artery Stenosis (CAS)

	N(%)
CAS \geq 30%	106 (15%)
CAS \geq 50%	54 (8%, ICA PSV \geq 125cm/s) 14 (2%, ICA PSV/CCA PSV Ratio \geq 2)
CAS \geq 70%	12 (1.7%, ICA PSV \geq 250cm/s) 5 (0.7%, ICA PSV/CCA PSV Ratio \geq 4)

Results : AAA and IAA



	N(%)
AAA \geq 3cm	22 (3.1%)
AAA \geq 5cm	3 (0.4%)
IAA \geq 2cm	4 (0.6%)
IAA \geq 3cm	0 (0.0%)

Results : PAOD



	N(%)
ABI < 0.9	37 (5.3%)
ABI < 0.6	6 (0.9%)

Conclusion



- Preliminary Results
- Main Concern is the Bias from General Population
- Expected Final Number for This Study
: 1500
- In Korea
: Prevalence of each vascular disease in old male group :
5%, 100,000 persons
Indication for treatment in old male group :
0.5% 10,000 persons
- Need to Prepare for Coming Aged and Super Aged Society

Management of Vascular Disease Found in Screening Tests : AAA

M / 70, Abdominal Pain for 5 years Undiagnosed



Management of Vascular Diseases Found in Screening Tests : PAOD

M/80 , ABI Right 0.4 before, ABI Right 1.0 after

