

뇌신경재활

게시일시 및 장소 : 10 월 18 일(금) 13:15-18:00 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 15:45-16:30 Room G(3F)

## **P 2-95**

### **A Comparison Study of Operational Definition of Cerebral Infarction Based on Health Insurance Data**

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#### **Introduction**

In 2014, the National Health Insurance Corporation(N.H.I.C) released cohort data containing 1 million randomly selected individuals for the purpose of establishing research data. However, due to the data collected by the N.H.I.C in principle for the purpose of claiming medical expenses, diseases not classified as detailed clinical information or billing code, and it can carry out inaccurate studies on the use of data. To overcome these limitations, operational definitions of each disease need to be exploited. The purpose of this study is to identify several operational definitions of the occurrence of cerebral infarction and compare them with existing literature data to find the most relevant criteria. Through this, we will provide information for accurate research to researchers who utilize health claim data.

#### **Methods**

The data used in this study was the N.H.I.C sample cohort for the 14 years from 2002 to 2015. It was 2% sampled data on stratified sampling methods that take into consideration the gender, age, insurance quintile, and region for all people (48,222,537 persons) who are eligible for health insurance. In order to identify the incidence of cerebrovascular disease, the incidence per 100,000 people was calculated from 2006 to 2015. After that, a group of experts on cerebrovascular diseases were discussed about the number of incidents and incidence trends. We defined the following criteria to identify the current status of cerebrovascular disease patients over the past decade. Main diagnosis and secondary(2') diagnosis, main diagnosis, main diagnosis / 2' diagnosis + hospitalization, main diagnosis + within 7 days (ER+ Hospitalization), main diagnosis+(CT or MRI), main diagnosis + hospitalization + (CT or MRI), main diagnosis + (Hospitalization or ER) + (CT or MRI).

#### **Results**

The incidence of cerebral infarction defined by main&secondary diagnosis showed a decreasing tendency by year, and it was analyzed that it decreased by half to 280.5 per 100,000 in 2015 from 480.3 per 100,000 in 2006. According to previous studies on the

incidence of stroke in 2000-2010, the trend of stroke patients is generally increasing, and some statistics related to stroke have also increased or maintained trends. Because of these conflicting results, it is limited to interpret the result of the analysis based on the above operational definition criterion to represent the current state of cerebral infarction in Korea. Therefore, the incidence of cerebral infarction based on the operational definition of adding "hospitalization or emergency room" and "CT or MRI" to the main diagnosis was the most stable compared with the results of the existing literature.

## Conclusion

In the N.H.I.C. data published in 2016, the operational definition of cerebral infarction was most stable when it was "primary diagnosis plus hospitalization plus CT or MRI findings" or "main diagnosis plus hospitalization or emergency room visit plus CT or MRI findings".

Table 1. Incidence Rate of Cerebral Infarction Patients by Definition Criteria (per 100,000 people)

Definition Criteria	Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Primary diagnosis /secondary diagnosis	480.3	470.6	445.8	419.1	383.4	348.4	330.2	307.7	278.0	280.5
Primary diagnosis	395.1	380.7	356.9	338.5	308.5	284.1	266.3	245.3	228.4	222.9
Primary/secondary diagnosis + Admission	179.1	190.3	188.0	175.3	166.3	158.5	160.9	153.1	144.9	146.0
Primary diagnosis + Admission	147.8	154.1	156.1	147.2	139.4	132.6	140.2	133.2	126.9	128.0
Primary diagnosis + (ER + Adm. within 7 days)	55.8	60.2	57.1	56.2	54.5	55.5	55.4	49.6	53.8	53.6
Primary disease + (CT or MRI)	233.5	235.5	225.2	213.3	198.7	187.3	175.2	163.8	158.5	155.3
Primary disease + Admission + (CT or MRI)	108.5	117.8	119.8	117.9	111.3	107.2	110.3	105.6	108.7	105.2
Primary disease + (Adm or ER) + (CT or MRI)	126.4	136.8	134.2	130.4	126.0	121.0	119.6	112.3	116.7	112.0

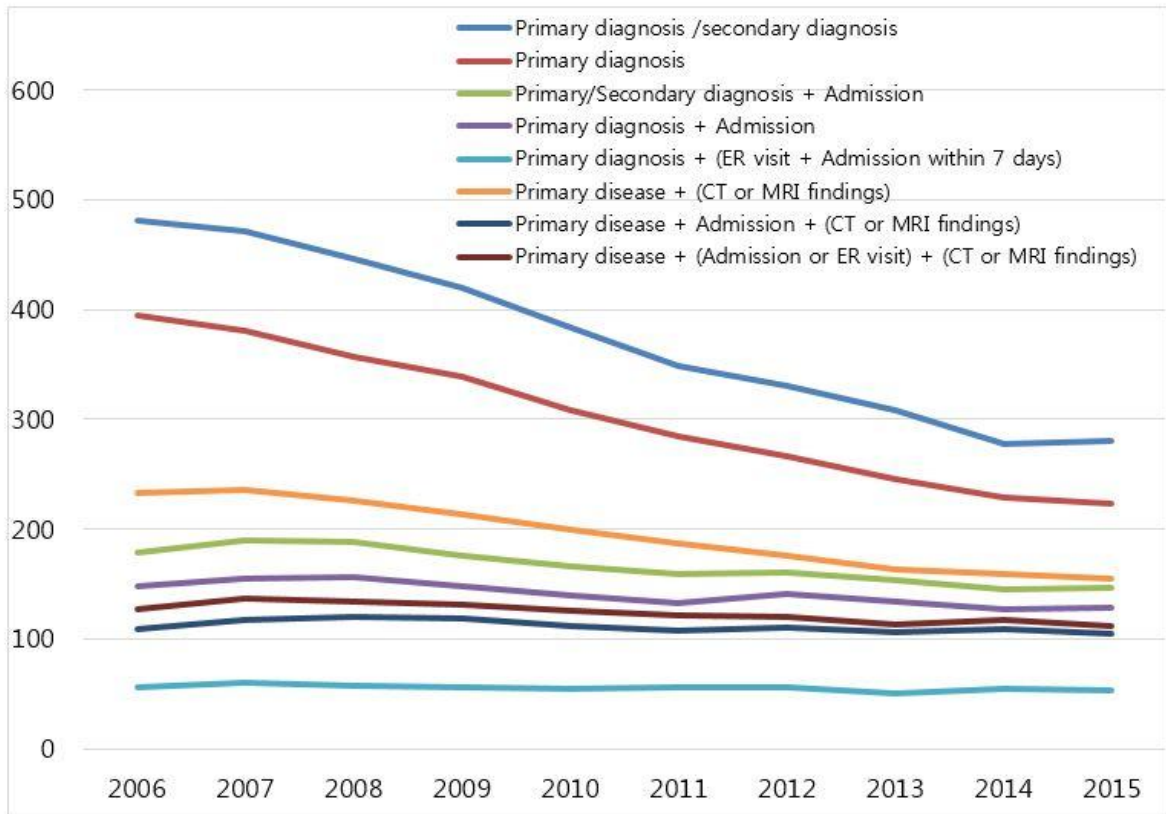


Figure 1. Incidence Trend of Patients with Cerebral Infarction (per 100,000 people)