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分担研究報告書

Burden of chronic diseases in Japan: the Longitudinal Survey of Middle-age
and Elderly Persons, 2005-2013
(本邦における慢性疾患負担: 中高年縦断調査による結果 2005-2013)

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研究要旨

本研究は近年の様々な疾患の障害生存年数の傾向を明らかにすることを目的とした。中高年縦断調査(2005年～2013年)の糖尿病，脳卒中，虚血性心疾患，悪性新生物の自記式質問紙の回答より，障害生存年数を $YLD_{prevx} = P_x \times Dw_x$ (P_x :有病割合， Dw_x : Global Burden of Disease in 2010により推定された障害の重み)として計算した。2つの疾患についての重みは $[1-(1-Dw_1)*(1-Dw_2)]$ とした。

総対象者数はベースライン時，男性(50-59 歳)16,737 人，女性(50-59 歳) 17,768 人であり，有病割合は 2005 年時点で 1000 人あたり，156.3 人(男性)，93.0 人(女性)，2009 年時点で男性(50-59 歳)205.5 人，女性(50-59 歳) 124.5 人であった(表 1)。YLD は 2005 年から 2008 年にかけて 168.1 から 234.6(男性)，153.8 から 203.6(女性)と，ともに増加した。YLD 割合については 1000 人あたり 10.0 人から 14.0 人(男性)，8.7 人から 11.5 人(女性)となった。

2005 年から 2008 年について慢性疾患による YLD 割合は増加していた。

A . Objective

The aim of this study is to clarify the trends of years of living with disability (YLD) for self-reported outcomes and their main attributive risk factors in the longitudinal surveys in the middle-aged Japanese population between 2005 and 2013.

B. Methods

Data were extracted from the Longitudinal Survey of Middle-age and Elderly

Persons (LSMEP) between 2005 and 2013. The self-reported presence of diabetes, stroke, (ischemic) heart diseases, and cancer with diagnosis were included in the analysis. The sex and calendar-years specific YLDs were calculated by $YLD_{prevx} = P_x \times Dw_x$, where P_x being the prevalent cases and Dw_x being the disability weight that estimated by the Global Burden of Disease in 2010 (Salomon JA, et al. Lancet Global Health 2015; Haagsma JA, e

t al. Popul Health Metr 2015). The combinations of disability weights were estimated by, e.g., for the prevalence of two diseases, $[1-(1-D_{W1})*(1-D_{W2})]$ (Theo Vos, et al. Lancet 2012).

No any personal information was accessed and thus no ethical clearance was conducted for this research.

C. Results

The total number of study participants (aged 50-59 years in 2005; m: 16,737 and f: 17,768) during 2005 and 2008 were used for analysis. The prevalence proportion of four diseases was 156.3/1000 in men and was 93.0/1000 in women in 2005, while it was 205.5/1000 in men and 124.5/1000 in women in 2009 (Table 1).

The YLDs of studied diseases were increased between 2005 and 2008, from 168.1 to 234.6 in men and 153.8 to 203.6 in women. The YLD proportions were increased from 10.0 to 14.0/1000 in men and from 8.7 to 11.5/1000 in women (Table 1). In addition, the comorbidity of at least two diseases were observed in 79 men with 10.3 to 10.8 YLDs and in 21 women with 3.7 to 3.9 YLDs during 2005 and 2009, respectively.

D. Discussion

The analysis results with showing increased YLDs and YLD proportions provide useful information on the burden of disease in the middle aged Japanese. Because the sequela of the prev-

alent diseases were different for each patient, thus the severity of conditions need to be clarified in details by a available data in order to accurately reflect the burden of studied diseases.

More analysis are needed to be carried out for the YLD trends with the extended study years (from 2005 to 2013) and for YLDs attributed fractions to single and joint risk factors of smoking, alcohol drinking and unphysical activities. In addition, the sensitivity analysis for YLDs should be given according to the international estimations (ranges) of the disability weights, with considering the sequela status of subjects regarding diagnosis and/or treatment profiles.

E. Conclusion

The YLD proportions of studied chronic diseases were increasing in the middle aged Japanese men and women during 2005 and 2008.

F . 研究発表

1 . 論文発表

None

2 . 学会発表

(発表誌名巻号・頁・発行年等も記入)

None

G . 知的財産権の出願・登録状況 (予定を含む)

1 . 特許取得

2 . 実用新案登録

3 . その他

Table 1 Number of diseases, prevalence proportion, YLDs, and YLD proportions, 2005 - 2008

	Number of diseases				Prevalence proportion (1/1000)				YLDs				YLD proportion (1/1000)			
	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008	2005	2006	2007	2008
Male																
Diabetes	1537	1789	1949	2051	91.8	106.9	116.4	122.5	30.7	35.8	39.0	41.0	1.8	2.1	2.3	2.5
Ischemic Heart Disease	587	644	657	681	35.1	38.5	39.3	40.7	57.5	63.1	64.4	66.7	3.4	3.8	3.8	4.0
Stroke	266	272	287	320	15.9	16.3	17.1	19.1	20.0	20.4	21.5	24.0	1.2	1.2	1.3	1.4
Cancer	226	245	329	388	13.5	14.6	19.7	23.2	59.9	64.9	87.2	102.8	3.6	3.9	5.2	6.1
Total	2616	2950	3222	3440	156.3	176.3	192.5	205.5	168.1	184.2	212.1	234.6	10.0	11.0	12.7	14.0
Female																
Diabetes	826	989	1095	1175	46.5	55.7	61.6	66.1	16.5	19.8	21.9	23.5	0.9	1.1	1.2	1.3
Ischemic Heart Disease	308	336	355	372	17.3	18.9	20.0	20.9	30.2	32.9	34.8	36.5	1.7	1.9	2.0	2.1
Stroke	160	157	174	173	9.0	8.8	9.8	9.7	12.0	11.8	13.1	13.0	0.7	0.7	0.7	0.7
Cancer	359	358	445	493	20.2	20.1	25.0	27.7	95.1	94.9	117.9	130.6	5.4	5.3	6.6	7.4
Total	1653	1840	2069	2213	93.0	103.6	116.4	124.5	153.8	159.4	187.7	203.6	8.7	9.0	10.6	11.5

YLDs are calculated by using Global Burden of Disease study disability weights, with multiplying the prevalence number.

YLD proportion: YLDs divide by population

