

Korean Medical Citation Index(KoMCI) and Journal of Korean Neurosurgical Society

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The authority and reputation of a medical journal is based on the number of received citations. Korean Medical Citation Index (KoMCI) provides information about citations of Korean medical journals since 2002. All six issues of KoMCI (from 2000 to 2005) were used for analysis. Citations, impact factor, and their changes were evaluated. We compared the data of Journal of Korean Neurosurgical Society(JKNS) with other Korean medical journals. The impact factor(IF) of 2005 maintained increased value since 2004, although the impact factor excluding self citation(ZIF) returned previous low value. Improvement in proportion of Korean citations and in proportions of non-self received citations were encouraging changes. Although there were some improvements, the status of JKNS with respect to ZIF is still behind other Korean medical journals selected for comparison. Improvement of the status of JKNS by aid of KoMCI and enhanced reputation of KoMCI by its positive influence on JKNS or other Korean medical journals will be beneficial to members and medical societies of Korea.

KEY WORDS : Journal of Korean Neurosurgical Society · KoMCI · Impact factor · Citation.

Introduction

The intrinsic value of a scientific publication lies in exchange of new facts. Therefore, it is natural that the authority and reputation of a medical journal is based on the number of received citations. Korean Medical Citation Index (KoMCI), sponsored by Korean Foundation for the Support of Medical Sciences, provides information about citations of Korean medical journals.

We performed citation analyses using KoMCI in order to evaluate the status of Journal of Korean Neurosurgical Society (JKNS)⁹⁻¹¹⁾. In addition to citation analysis using recent and previous issues of KoMCI, brief consideration of possible methods to improve the status of JKNS is presented in this article.

Materials and Methods

KoMCI 2000, published at March 2002, made it possible for objective analysis of citations of Korean medical journals. It analyzed citations of 69 medical journals

enlisted in Koreamed among about 220 medical journals published in Korea at the year of 2000. After the publication of KoMCI 2001 at December 2002, KoMCI 2002, 2003, 2004 and 2005 were published with regular pace at June 2003, June 2004, June 2005, and June 2006, respectively³⁻⁸⁾.

KoMCI provides informations on how many Korean articles are cited in Korean medical journals and which journals are cited how frequently. They also present impact factors at the same way used by Science Citation Index(SCI). Since 2005, every data of KoMCI became available on internet.

All six issues of KoMCI were used for analysis³⁻⁸⁾. Citations, impact factor, and their changes were evaluated. We tried to find out what is to be done to improve the status of JKNS by comparison of our journal with other Korean medical journals. The selected journals for comparison was as follows : Journal of Korean Neurological Association(JKNA, ISSN 1225-7044), Yonsei Medical Journal(YMJ, ISSN 0513-5796), Journal of Korean Medical Science(JKMS, ISSN 1011-8934), Korean Journal of Radiology (KJR, ISSN 1229-6929). JKNA was selected because it dealt similar field in medical science. The

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other three were selected because they were indexed in Medline or Scientific Citation Index(SCI).

Results

The number of annually published articles in JKNS was between 210 and 280. There were about 19.4 references per article, and this figure showed no remarkable change from 2000 to 2005. During the year from 2000 to 2003, the proportion of Korean reference remained stationary in about 5% (about one Korean citation per article). This figure rose to about 8% (about one and half Korean citations per article) during recent 2 years (Table 1).

The impact factor(IF) showed remarkable improvement in both numeric value and rank since 2003. The IF decreased a little at 2005, although it is still higher compared to those of years between 2000 and 2002. With respect to the impact factor excluding self citation (ZIF), there was a marginal improvement. The rising trend of ZIF between year 2002 and 2004 was not sustained (Table 2).

JKNS received citations from 13 to 20 Korean medical journals. More than four out of five received citations were from JKNS itself. The number of received citations increased to 401 at 2004, considerably higher than during 2000 to 2003. Although the number decreased at 2005, the number of non-self citations increases remarkably. The number of received citations from medline or SCI indexed journals in recent 2 years returned to 0 as in years from 2000 to 2003 (Table 3).

Table 1. Changes of Citation Data of Journal of Korean Neurosurgical Society²⁻⁶⁾

Year	Number of articles	Number of citations	Korean Journal citations(%)	Citations per article	Korean citations per article
2000	245	5,048	276(5.47)	20.6	1.1
2001	280	5,076	233(4.59)	18.1	0.8
2002	221	4,001	227(5.67)	18.1	1.0
2003	241	4,722	277(5.87)	19.6	1.1
2004	221	4,728	380(8.04)	21.4	1.7
2005	210	3,964	331(8.35)	18.9	1.6

Table 2. Change of Impact Factors²⁻⁶⁾

Year(y)	Number of articles		Number of citations		Citations excluding self-citation		Number of enlisted journals	IF* (ranking)	ZIF† (ranking)
	y-2	y-1	y-2	y-1	y-2	y-1			
2000	244	247	24	15	2	1	69	0.079 (58)	0.006 (61)
2001	247	245	17	16	4	3	75	0.065 (64)	0.008 (65)
2002	245	280	19	12	1	2	81	0.059 (69)	0.006 (71)
2003	280	221	51	37	3	2	92	0.176 (35)	0.010 (77)
2004	221	241	50	41	7	4	105	0.197 (36)	0.024 (77)
2005	241	221	35	39	3	3	113	0.160 (55)	0.013 (96)

* IF : impact factor (number of citations/number of articles). † ZIF : impact factor excluding self-citation

Table 3. Changes of citations received : Journal of Korean Neurosurgical Society²⁻⁶⁾

Year	Citations	Self citations	Non-self citations	Citations from SCI/Medline journals		No. of citing journals*
				Total	Recent 2yr	
2000	276	246 (89.1%)	30 (10.9%)	2	0	20
2001	238	198 (83.2%)	40 (16.8%)	11	0	13
2002	227	189 (83.3%)	38 (16.7%)	1	0	20
2003	281	239 (85.1%)	42 (14.9%)	3	0	17
2004	401	349 (87.0%)	52 (13.0%)	6	3	18
2005	371	283 (76.3%)	88 (23.7%)	6	1	24

*excluding Journal of Korean Neurosurgical Society itself

Table 4. Changes of Impact factors JKNS vs SCI/Medline enlisted journals²⁻⁶⁾

Year	J Korean Neurosurg	J Korean Soc Neurol Assoc	Younsei Med J*†	J Korean Med Sci*†	Korean J Radiol*†
2000	0.079 (0.006)‡	0.127 (0.029)	0.135 (0.103)	0.187 (0.171)	N/A§
2001	0.065 (0.008)	0.102 (0.022)	0.122 (0.108)	0.166 (0.145)	0.049 (0.000)
2002	0.059 (0.006)	0.117 (0.042)	0.145 (0.093)	0.139 (0.127)	0.259 (0.198)
2003	0.176 (0.010)	0.134 (0.032)	0.120 (0.102)	0.216 (0.180)	0.425 (0.238)
2004	0.197 (0.024)	0.125 (0.035)	0.131 (0.101)	0.167 (0.141)	0.313 (0.175)
2005	0.160 (0.013)	0.111 (0.032)	0.168 (0.121)	0.205 (0.165)	0.150 (0.113)

* SCI indexed. † Medline indexed. ‡ number in parenthesis : ZIF (IF excluding self-citation). §not available (first issue in 2000)

These changes were compared to other Korean medical Journals. JKNS showed remarkable improvement between 2002 and 2003 in IF, whereas that of JKNA showed little change. However, despite to recent improvement, ZIF of JKNS remained lower value than that of JKNA. When IF and ZIF of JKNS were compared to those of journals indexed in Medline or SCI, the difference in ZIF became more prominent, although IF was in similar range (Table 4).

Discussion

KoMCI provides many valuable informations including the number of citations, impact factors, from which journals the citations came from, and how many journals were cited at a journal. All of the informations provided by KoMCI became available since 2005 (Fig. 1). Anyone who

has access to internet is able to know how many an article is cited and which journal cited.

By using previous issues of KoMCI, the authors had performed citation analyses⁹⁻¹¹⁾. In this article, by using all six issues of KoMCI, we tried to evaluate the current status and trend of changes of JKNS. One of the encouraging findings is improvement in proportion of Korean citations in 2004 and mai-

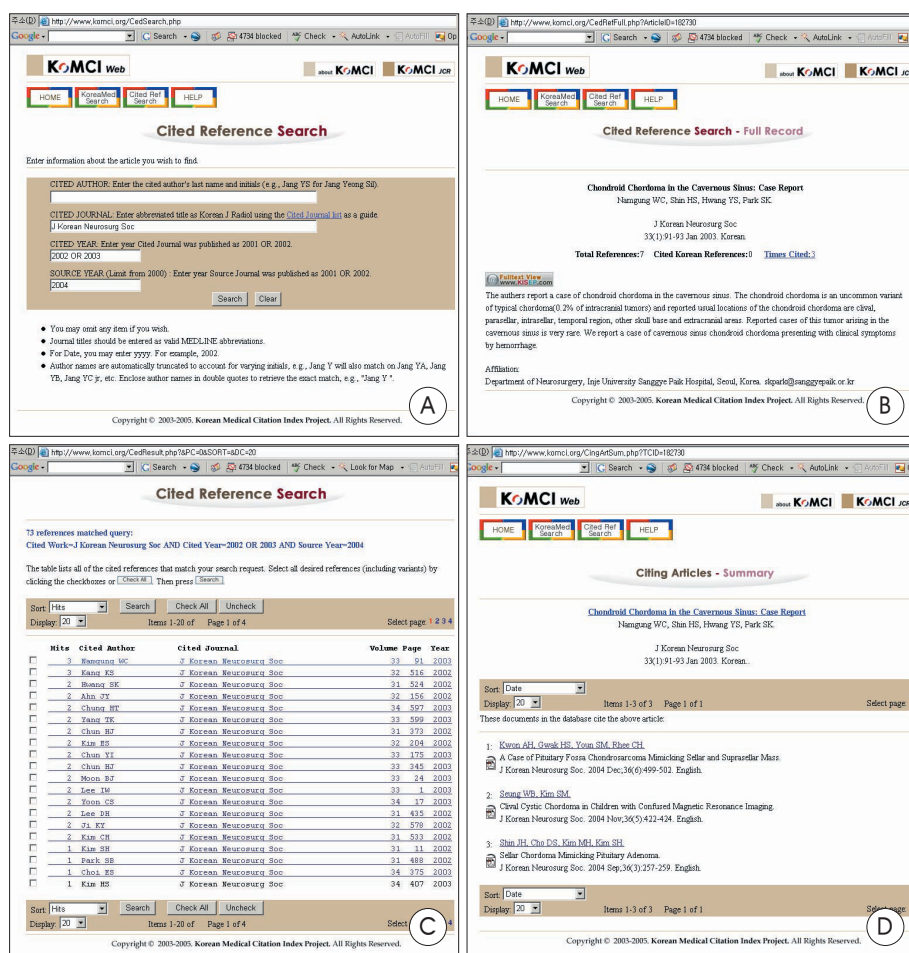


Fig. 1. Screen capture of KoMCI-web. A : Conditions of search are input in order to know the number of received citations and list of the articles published in JKNS at 2004 from Koreamed journals between 2002 and 2003. B : The list of articles and the number of citations are displayed. C : Upon selection of article at the top line of the list shown in B, more detailed information of that article is displayed. D : Detailed information of received citations of that article is displayed when times cited is clicked. (courtesy of KoMCI Project Board, reproduced with permission).

aintenance of the trend in 2005. However, it was still lower than the average value of KoMCI Journals. The average proportion of Korean citations were 8.52% in KoMCI 2000, which slightly increased to 10.11% in KoMCI 2005. Someone may argue that proportion of Korean citation has nothing to do with the status of Korean medical journal. Even if the fact that majority of new and important medical informations are published in foreign journals is considered, the low proportion of Korean citations means that the authors have little interest in the medical informations published in Korean journals. Besides, it looks irrational and a little nonsense to hope that our journal, to which we pay little attention, receive many citations from others.

Another is improvement in proportions of received citations. The proportion of non-self citations rose to 23.7%, in KoMCI 2005, remarkably higher than those of during 2000 and 2004 (Table 3). If this figure is sustained and accompanied by increase

in the number of citing journals, there would be improvement in ZIF.

With respect to IF and ZIF, the increased IF remained stationary at 2005. However, ZIF returned to previous low values, both in numerical value and rank (Table 2). It was much lower than those of Medline or SCI-indexed journals, and lower than that of JKNA (Table 4). The low value in ZIF probably results from the number of citing & cited journals. When compared to JKNA, JKNS cited 19 journals and received citations from 24 journals excluding itself, whereas JKNA cited 38 journals and received citations from 36 journals.

During the year 2000 and 2006 there has been many changes in JKNS. The design of cover, formation of article were changed, new items such as 'inside story' and 'in the next issue' were added. Review articles of experts with world-wide reputation were added. Only English manuscripts were accepted since January 2005.

In addition to change in formation of JKNS, several projects were done to improve the system of JKNS. Workshops for peer review of manuscripts, preparation of English manuscript, methods of statistical analyses were held in order to improve the process of peer-review and to help the authors to improve the quality of their manuscripts. We published several articles in order to evaluate the current status of our journal, and to notify it to the readers^{1,2,9-11}. In order to enhance the accessibility of JKNS to native and foreign investigators, the journal became accessible on internet in portable document format(PDF), either on JKNS homepage or on link to Koreamed. In order to improve the peer review process and to promote for foreign authors to submit manuscripts of good quality, we are trying to implement on-line submission and review system.

There has been some noticeable improvements in status of JKNS. It has been enlisted in Korean Research Foundation (KRF) since 2003. Enlisting in KRF, government organization founded to promote and support academic activities, means authentication of its quality status among Korean scientific

journals. The journal has been indexed in Chemical Abstract Service(CAS) since January 2006. Such achievements result from cooperation of members of Korean Neurosurgical Society (KNS), and the improved status of JKNS is a reward for such effort.

Although JKNS has achieved some improvements, there are still long way to go. We hope that JKNS is to be indexed in internationally well-known database, such as Medline or SCI. The only way to accomplish this goal is improving the quality of articles of JKNS. Articles of high quality will result in enhanced citation and impact factors. Journal of high-quality papers with many received citations will have higher chance to be indexed in internationally well-known databases. Improving the quality of articles starts from preparation of manuscript. Before submission of manuscripts, authors are to check their manuscripts in reviewer's and reader's point. Reviewers are to evaluate the manuscripts to enhance the strong point and to make up for the weak point. The editorial committee is required to do constant effort to improve the process of review and editing. Therefore, cooperation of all the members of KNS is essential.

The more citations one journal gets, the more competition of manuscripts for publish. Only manuscripts with high quality would pass such competition, and such manuscripts will draw more interests and more citations. By this way, journals with high IF's can maintain or improve their status further. All the members of KNS should take part in task of improving the quality of JKNS. If the members of KNS do not have enthusiasm for JKNS, the chance of JKNS to be improved enough for enlist in Medline or SCI would be very low.

The only and objective methods of evaluating the status of a scientific journal is citations. Whether JKNS is in the way of progress or not can also be evaluated by data provided by KoMCI, because the data it presents is a reflection of the status of our journal. With KoMCI, we can evaluate whether the projects formed to improve the status of JKNS are successful or not. Being interested in KoMCI, and trying to improve

the status of JKNS with its data is easy and feasible way to achieve our goal of indexing in Medline or SCI. It is of great fortune for Korean members of medical society that such invaluable information is available without any charge.

The painstaking contribution for establishing and maintaining KoMCI is to be appreciated. If JKNS or other Korean medical journals can improve their reputations by the aid of KoMCI, it would be more influential in Korea and possibly in foreign countries. Such complementary improvements in Korean medical journals and KoMCI will be real and fruitful reward those who devoted for establishment of KoMCI.

Conclusion

KoMCI provides objective data on citations of Korean medical journals. Success of our effort to improve the status of JKNS can also be evaluated KoMCI. Improvement of the status of JKNS by aid of KoMCI and enhanced reputation of KoMCI by its positive influence on JKNS or other Korean medical journals will be beneficial to all the members and medical societies of Korea.

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