

Analysis of Papers Published on Journal of Korean Neurosurgical Society in 2006

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Since the authors participated in the editorial committee in October 2001, many dramatic changes have been introduced to the Journal of Korean Neurosurgical Society (JKNS). The format, the external appearance, the editorial system, and the reviewing process have been transformed with new standpoints to enhance the quality and to raise the level of JKNS. The authors reviewed papers published on JKNS in 2006 with special interest on the changes of JKNS during last five years. In total, 186 articles were published on JKNS in 2006. Because the editorial committee asked two review articles to renowned neurosurgeons, there were 184 peer-reviewed articles. Eighty seven clinical articles, eighty one case reports, seven laboratory investigations, four special articles and five technical reports were published. This distribution changed from the previous year with marginal value of statistical significance ($p=0.101$). The ratio of the original articles (laboratory investigations and clinical articles) decreased to 51.1% from 57.5% of 2005 but the difference was not statistically significant ($p=0.222$). The number of laboratory investigations significantly decreased to 7 (3.8%) from 19 (10.4%) of 2005 ($p=0.014$). Other changes such as number of authors per article, number of institutes which published papers on JKNS have been examined to assess the trend and/or change in characteristics of papers published on JKNS.

KEY WORDS : Published papers · Journal of Korean Neurosurgical Society · 2006.

Introduction

Since the authors participated in the editorial committee in October 2001, many dramatic changes have been introduced to the Journal of Korean Neurosurgical Society (JKNS). The format, the external appearance, the editorial system, and the reviewing process have been transformed with new standpoints to enhance the quality and to raise the level of JKNS. In another paper, Park et al.⁸⁾ analyzed a survey on the attitude of the members of Korean Neurosurgical Society to JKNS. The format of the cover system, introduction of commentary to published papers, and letters to the editor were the most positive changes. According to the survey, and with our own judgement, JKNS can be put at the same level with internationally renowned academic journals in outward appearance and/or format.

However, as most people agree, the more important factor to judge an academic journal is the quality of papers published

on that journal rather than its outward appearance or format. Though the authors can not tell the quality of the papers published on JKNS during the year 2006, we analyzed the characteristics of the articles to assess the trend or change during last five years. This kind of analysis has been published every year since 2002 at the end of the corresponding year. Unlike the previous four analyses, we compared the trends with those of five years ago as well as those of the previous year. Another useful way to estimate the value of an academic journal is to investigate how many times the articles on that journal are cited by other researchers. This analysis was performed by Yang et al.^{6,7,9-11)}. According to this study, the citation of JKNS, especially citations from other journals rather than JKNS, had not been improved so much during the last five years. This means that the articles on JKNS are still not valued by others. Though the current study can not evaluate the quality of each paper published on JKNS in 2006, the authors tried to extract as many as facts on the trend of the

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papers which can be used to assess the quality of papers in the long run.

At first, the type of articles, whether it is a clinical article or others, was summarized and compared with previous data. Change in ratio of clinical articles or laboratory investigations which generally require more effort and interest to prepare than case reports or technical reports can show a trend of papers on JKNS. Numbers of institutes which wrote papers on JKNS were also reviewed to assess interest or attitude of those institutes to JKNS. We hope that this analysis can stimulate people to revalue the articles on JKNS and to think about the future of the journal.

Analysis of Published Papers

JKNS published 186 articles in 2006. It was similar with 184 articles in 2005. Because about 15 articles were published on each issue, except some review articles and/or special articles, the number of articles published annually seemed to be stabilized at a little over 180 (Fig. 1). This is nearly 25% less than 240 of 2003 when it published 20 articles monthly³⁾. Two review articles published by renowned foreign neurosurgeons by request of the editorial committee of JKNS were excluded in this analysis because they had not been peer reviewed. Among the 184 peer reviewed articles, eighty seven (47.3%) were clinical articles, eighty one (44.0%) were case reports, seven were laboratory investigations (3.8%), five were technical reports (2.7%) and four were special articles (2.2%). The distribution of the papers in 2006 was not significantly different from that of 2005 (Pearson Chi-square $p=0.101$)⁴⁾. It was different with statistical significance from the distribution of the papers published on JKNS in 2002 (Pearson Chi-square $p=0.002$, Fig. 2). On the contrary that there was no technical reports or special articles in 2002, there were five technical reports and four special articles in 2006. The ratio of laboratory investigations decreased statistically significantly (Pearson Chi-square $p=0.002$). More various types of papers were published in 2006 than 2002.

We classified the papers into two groups. The 'original articles' group includes clinical articles and laboratory investigations. The 'other articles' group consists of case reports, technical reports, and special articles. In 2006, there were 94 papers in the original articles group and 90 in the other articles group. The ratio of the original articles was 51.1% and it was not so different from 57.5% of 2005 (Pearson Chi-square $p=0.222$)⁴⁾ and 53.2% of 2002 (Pearson Chi-square $p=0.671$)⁴⁾.

The number of authors per article was 4.3 in average and this was the same with that of 2005. The average number of authors of original articles was 5.0 and that of other articles was 3.6. The average number of authors per original article,

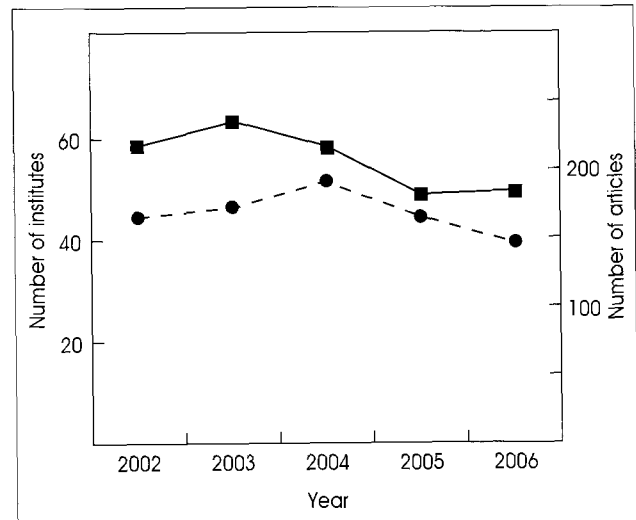


Fig. 1. The numbers of institutes which published at least one article on JKNS in a year are drawn (dashed line with black circles). The numbers of papers published on JKNS each year are also drawn (solid line with black squares).

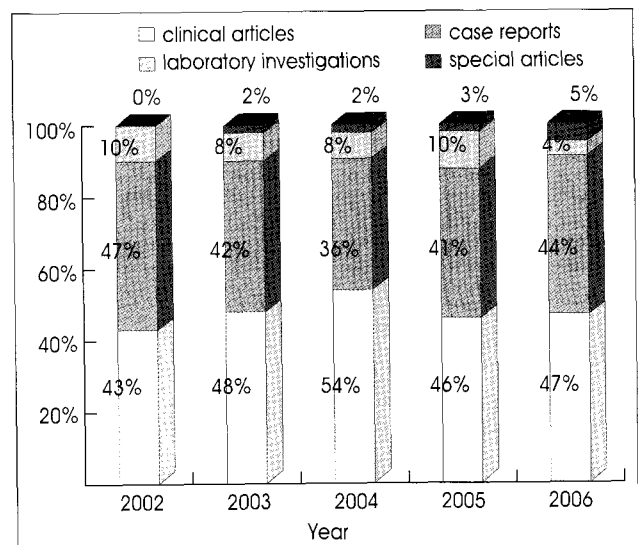


Fig. 2. Change in types of papers published on JKNS is shown. Between 2002 and 2006, the ratio of laboratory investigations decreased while the ratio of special articles increased.

and per other article were similar with those of 2005, 4.8, and 3.5, respectively. There was no statistically significant difference between 2006 and 2005 (Student t -test $p>0.5$). The number of authors remained stable since 2004²⁾. In 2003, the number of authors decreased from those of 2002 with statistically significant differences^{1,3)}.

All papers published on JKNS were written in English since July 2005. Unlike that there were 11 clinical articles written in Korean in 2005, the clinical articles were all published in English in 2006. Because there were only 16 English articles (7.3%) in 2002, the difference in the ratio of English articles between 2006 and 2002 was statistically significant (Pearson Chi-square $p=0.000$)¹⁾.

Table 1. Numbers and type of the papers published on Journal of Korean Neurosurgical Society in 2006. The original articles mean clinical articles and laboratory investigations. The other articles are case reports, technical reports, and special articles. Two review articles written by foreign authors were excluded in this table

Institute	Original articles	Other articles	Publications	Publications /board	Publications /resident
Baptist	1	1	2	0.50	0.50
Catholic	6	8	14	0.31	0.42
Chonbuk	4	2	6	0.86	0.75
Chonnam	4	6	10	0.91	0.83
Chosun	5	5	10	2.00	2.00
Chung-Ang	3	2	5	0.63	0.63
Chungbuk	0	1	1	0.25	0.25
Chungnam	0	1	1	0.14	0.17
Daegu Catholic	1	1	2	0.40	0.67
Daejin Medical Center	1	1	2	0.50	0.67
Dankook	1	1	2	0.33	1.00
Dong-A	3	4	7	1.17	0.88
Eulji	1	0	1	0.08	0.17
Ewha	0	2	2	0.20	0.33
Gachon	1	2	3	0.30	0.38
Gosin	2	1	3	1.00	0.75
Gyeongsang	0	2	2	0.33	0.25
Hallym	4	3	7	0.29	0.47
Hanyang	6	6	12	1.00	1.00
Inha	2	0	2	0.25	0.22
Inje	7	3	10	1.25	0.53
Keimyung	2	3	5	0.83	0.83
Konkuk	0	1	1	0.17	0.25
Korea	3	0	3	0.18	0.25
Kyungpook	2	4	6	0.75	0.50
National Medical Center	1	0	1	0.20	0.25
Patima	2	0	2	0.33	0.50
Presbyterian	1	3	4	1.00	0.80
Pusan	1	3	4	0.57	0.50
Seoul	9	9	18	0.58	1.00
Seoul Medical Center	1	0	1	0.25	0.33
Soonchunhyang	2	0	2	0.13	0.20
Sun	0	2	2	0.67	0.50
Sungkyunkwan	2	1	3	0.16	0.16
Ulsan	3	3	6	0.25	0.43
Wonkwang	2	2	4	0.57	0.67
Wooridul	4	2	6	0.14	-
Yeungnam	3	1	4	0.67	0.44
Yonsei	4	3	7	0.22	0.26

- : no residents

When we count the number of papers published on JKNS in 2006 per institutes by the affiliation of the corresponding author, the number of institutes which published at least one article on JKNS in 2006, regardless of the type, decreased to 39 from 44 of 2005 (Table 1). Branch hospitals of a medical school were tied to the medical school and only the medical school is presented in Table 1. Since the number of institutes hit the peak, 51 institutes, in 2004, it seems to be decreasing

(Fig. 1). Unfortunately, there was no peer reviewed articles written by foreign corresponding authors on JKNS in 2006. Among the 53 resident training institutes only 38 institutes published one or more papers on JKNS in 2006.

Seoul National University published 18 papers (9.8%) and took the first place in number of articles per institute. Catholic University was at the second place by publishing 14 articles (7.6%). Hanyang University was at the third place by publishing 12 articles. Chonnam University, Chosun University, and Inje University were at the fourth place together by publishing 10 papers (5.4%), respectively. Number of articles published by top five institute was 64 (34.8%) and difference from that of 2005 (62, 33.9%) and 2002 (70, 32.0%) were statistically meaningless (Pearson chi-square $p=0.913$ and 0.596 , respectively).

Seoul National University published nine original papers (9.6%) and took the first place in number of original articles per institute. Inje University was at the second place by publishing seven original articles (7.4%). Hanyang University and Catholic University were at the third place by publishing six (6.4%) articles. The fifth institute which published five original articles (5.3%) was Chosun University. Number of original articles published by top five institutes was 39 (37.5%) and difference from that of 2005 (33, 35.1%) and 2002 (42, 36.2%) were not statistically significant (Pearson chi-square $p=0.769$ and 0.886 , respectively). Seoul National University which had taken the first place by publishing the most original articles in three consecutive years from 2002 to 2004 regained the first place. The largest number of other articles were published by Seoul National University, nine articles (10.0%). Catholic University was at the second place by writing eight other articles (8.9%). Chonnam National University and Hanyang University published six other articles (6.7%) and took the third place together. Chosun University was at the fifth place by publishing five other articles (5.6%).

In Table 1, the numbers of papers per neurosurgery board member and per resident are also given. In three consecutive years, Chosun University was at the first place in number of publications per board member by publishing 2.00 articles per board member. It was also at the first place in number of papers per resident (2.00 papers per resident). Board members at Inje University published 1.25 articles per board member and took the second place. Following institutes in number of papers per board members were Dong-A University (1.17), Gosin University (1.00), Hanyang University (1.00), and Presbyterian University (1.00).

The order of institutes published more papers per resident was, Chosun University (2.00), Dankook University (1.00), Hanyang University (1.00), Seoul National University (1.00), and Dong-A University (0.88).

Discussion

During the last five years, many changes in format and outward appearance of JKNS have been introduced to arouse reader's interest on the journal. According to the recent survey, many people recognized the change in JKNS nowadays⁸). However, this survey showed a dark side of the attitude of the readers to JKNS. On the contrary that more than 60% of the readers showed very positive response to the cover design and commentaries, only 16% of the readers explained that the articles on JKNS are excellent. Most people said that they are just fair (77%) or bad (6%). It means that readers are satisfied with outward appearance or format of the journal but not with the quality of the papers. Another paper that analyzed status of statistics used in papers published on JKNS revealed that there are many facts to be considered or fixed as academic papers⁵). Though the current study can not reveal the quality of the papers on JKNS we can presume some attitudes of the authors, who are also readers of the journal at the same time, to JKNS. As we can see in Fig. 2, the ratio of laboratory investigations published on JKNS decreased to 3.8% in 2006 from 10.1% of 2002 (Pearson Chi-square $p=0.014$). Instead, more special articles and technical reports were published in 2006 than 2002. The difference was statistically significant (Pearson Chi-square $p=0.002$). This change is desirable in a point that more various kind of knowledge can be shared among readers. However, decrease in number of laboratory investigations is very undesirable. In general, the laboratory investigation requires much more efforts in preparing, performing a study and writing a paper than other types of articles. As a result, it is usual that the quality of laboratory investigations is higher than other type of papers. As a cause of the decrease of laboratory investigations, it is mentioned that JKNS became an English journal though it is published in Korea. Many people say that once they write a paper in English they submit it to renowned international journals rather than JKNS. If it is true, it is also quite desirable in a point that they have chances to publish their works on prominent journals. By changing the official language of JKNS to English, it can be said that the authors have been stimulated to submit their works to international journals. It will help all the members to write good articles and submit better articles on JKNS in the long run.

The number of published papers in a year have decreased during the last five years. This is one of the results of the efforts to enhance quality of the papers on JKNS. By reducing the number of papers on the journal, it can be expected that more filtered papers would be published. The effect of reducing number of papers have not been shown as increase in citation number yet^{7,10}). But, the authors hope that it will help

to increase citation of the papers published on JKNS in future and expect that number of articles to be more reduced.

According to Fig. 1, the number of institutes which published at least one or more papers on JKNS in recent year seems to be decreasing. It peaked at 51 in 2004 and decreased to 39 in 2006. Considering the fact that number of residents and resident training hospitals have been increased during the same period, the decrease in number of institutes publishing papers on JKNS is more obvious. This might be a result of the relaxation of the regulation of the neurosurgery board examination. In 2002, a resident must have at least one original article and one case report published on JKNS. The qualification of the original article was relaxed to have at least one original article on JKNS or Science Citation Index(SCI) registered journals. And, more importantly, two original articles on any other journals can replace one original article on JKNS or SCI registered journals. After this relaxation, the residents who do not want to submit articles on JKNS have an option to fulfill the requirement by submitting his or her works to any other journals. This leakage of articles would result in decrease in number of manuscripts submitted to JKNS and number of institutes, too. However, in another point of view this will also contribute to enhance the quality of the papers published on JKNS because it is expected that higher quality manuscripts to be submitted to JKNS.

Conclusion

In 2006, the transition of JKNS from a Korean journal to an English journal has been completed by publishing all 186 papers in English. Though it caused a little decrease in number of manuscripts submitted to JKNS, and possibly decrease in laboratory investigations, it is a necessary procedure toward an internationally recognized journal. Format and outward appearance of JKNS seem to be on a certain level. The more hard work, but more important, remains is to enhance the quality of the papers published on JKNS. The authors hope that this analysis can stimulate people to revalue the articles on JKNS and to think about the future of the journal.

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