

Domestic Characteristics and Trends of Publications on Bone Metabolism in South Korea between 1998 and 2012

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Background: This study was undertaken to investigate the trends in domestic publications on bone metabolism during the last decade, and to document the characteristics of articles in South Korea. **Methods:** Articles on bone metabolism including osteoporosis published between 1998 and 2012 were evaluated, in terms of title, type of articles, subspecialty, and authors' affiliations. We used descriptive statistics for presenting the characteristics of domestic publication on bone metabolism. **Results:** Total of 247 articles, published articles between 1998 and 2012, were reviewed. Over a total study period of 14 years, the number of articles which was initially 109 in the first half term increased to 247 during the period of second half. Of these 247 articles, 52 were on basic research, and 195 were on clinical research. Although the types of article were added in the later 7 years were much diverse than that of the earlier 7 years, the proportion of original articles has decreased. **Conclusions:** Our findings presented the characteristics and trends of domestic publication on bone metabolism in South Korea, and concerns for editorial boards in future.

Key Words: Bone, Metabolism, Publications

INTRODUCTION

Nowadays, evidence-based medicine has received much attention in clinical practice, because it could provide scientific information on improving treatment outcomes.[1] Furthermore, these published articles encourage physicians to reach a consensus on controversial medical issues and allow researchers to share their findings with their peers.

Physicians and researchers who work in bone metabolism also obtain useful information from journals. In Korea, Korean Journal of Bone Metabolism (KJBM), the official journal of Korean Society for Bone and Mineral Research (KSBMR), has been a representative domestic journal on bone metabolism since 1994. There was no report on characteristics and national trends of publication on bone metabolism in South Korea.

The aim of this study was to investigate the characteristics and national trends

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of bone metabolism articles published in KJBM between 1998 and 2012.

METHODS

This study was exempted from Institutional Review Board (IRB) review because it did not involve human subjects.

This systematic review included articles published between 1998 and 2012 in KJBM. Articles on bone metabolism were retrieved from database of KJBM (http://ksbmr.org/html/member/sub3/03_sub_01.asp). This database contains digital archives with PDF format. The full manuscript of each articles were retrieved to evaluate its characteristics.

Two authors (LYK, KSH) independently reviewed publication titles, the authors' names, the published year, the study design (retrospective and prospective), the type of article (original article, review article, case report, and lecture), and the corresponding authors' affiliations (internal medicine, orthopaedics, and gynecology) of each study.

We categorized the articles into basic and clinical research. And, we used calcium, cancer and bone, cartilage, genetic disease, muscle and bone, osteoblast/osteocyte/osteoclast, and osteoporosis – anabolic/antiresorptives/epidemiology/pathophysiology/diagnosis, fracture, and others, as sub-specialty.

If the raters (LYK, KSH) disagreed over the variables of an article, the final decision was made by a third rater (HYC).[2]

We used descriptive statistics to evaluate the characteristics in this study.

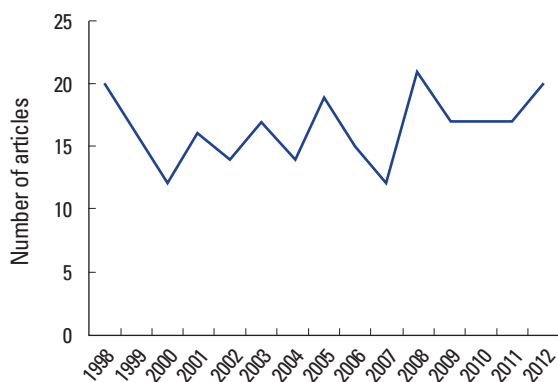


Fig. 1. The number of articles.

RESULTS

From the database, a total of 247 published articles were reviewed between 1998 and 2012. The mean number of annually published articles on bone metabolism was 16.5 (range, 12 to 21). Over a total study period of 14 years, the number of articles which was initially 109 in the first half term increased to 247 during the period of second half (Fig. 1). Of these 247 articles, 52 were on basic research and 195 on clinical research.

In terms of the type of articles, there were 194 original articles, 32 case reports, 15 review articles, and 6 lectures. The type of articles in the later 7 years was much diverse than those of earlier 7 years (Fig. 2).

Of the 45 original articles on basic research, 25 were categorized to osteoblast/osteocyte/osteoclast, 10 to osteoporosis – pathophysiology, 3 to cartilage, and 2 to cancer and bone. Of the 149 original articles on clinical research, 56 were categorized to osteoporosis –pathophysiology, 25 to osteoporosis – antiresorptives, 23 to osteoporosis - diagnosis, 20 to osteoporosis - epidemiology, and 10 to fracture (Table 1).

Over the past decade, of the 194 original articles, 83 original articles were published from internal medicine, 46 from orthopaedics, 18 gynecology, and 15 from family medicine.

During the study periods, there were no articles from foreign countries, because the KJBM has been published in Korean language.

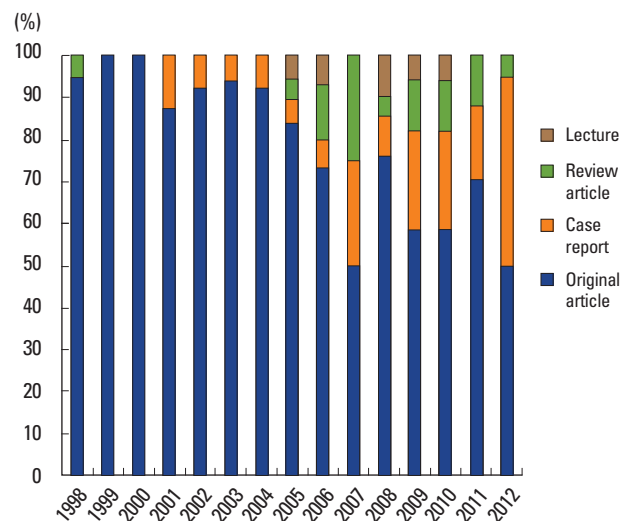


Fig. 2. Proportion of each type of article in Journal of Bone Metabolism (formerly Korean Journal of Bone Metabolism) from 1998 to 2012.

Table 1. The number of articles of each subspecialty in original articles of Journal of Bone Metabolism (formerly Korean Journal of Bone Metabolism)

Subspecialty	Basic research	Clinical research
Calcium		2
Cancer and bone	2	3
Cartilage	3	1
Genetic disease		
Muscle and bone		2
Osteoblast/osteocyte/osteoclast	25	
Osteoporosis – anabolic		
Osteoporosis – antiresorptives		25
Osteoporosis – epidemiology		20
Osteoporosis – pathophysiology	10	56
Osteoporosis – diagnosis		23
Fracture	1	10
Others	4	7

DISCUSSION

In this study, we found out that the total number of articles has increased, and articles on basic research reached about 20% of KJBM, which has been the representative journal for bone metabolism.

The proportion on review articles has increased over last decade, and the proportion of case reports has also increased for the same period. These meant that the numbers of original articles has decreased. The increased tendency of submission of original articles to international journal might be one of the reasons. In fact, many articles authored by South Koreans have been published in international journals by many authors from South Korea during the analyzed periods,[3-8] because the KJBM was neither registered nor accepted as a journal for personal achievement. However, the KJBM has been registered as candidate journal in National Research Foundation of Korea and has been archived in the database of KoreaMed since 2012.

In 2003 Editorial Letter, editorial boards documented that they are preparing to register the journal in the PubMed Central (PMC), after changing the name KJBM to Journal of Bone Metabolism (JBM) published in English. When JBM, the official journal of KSBMR, is registered in the PMC, many more original articles on bone metabolism will be submitted and published in JBM.

There were several limitations in our study. First, we did not include international journal. Recently, many articles from South Korea have been published in international journals. However, KJBM is a representative journal on bone metabolism in South Korea. Therefore, this study will be meaningful because domestic trends of bone metabolism could be estimated.

Second, our analysis did not include a detailed citation analysis. Korean authors have a difficulty in finding and citing articles from KJBM, mostly because the included articles could not be found in any database.

Despite these limitations, our results presented the characteristics and trends of domestic publication on bone metabolism in South Korea, as well as the concerns toward the editorial boards in future.

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