A majority of randomized controlled trials reported in the Japanese literature are not indexed in MEDLINE®

Eishu Nango1, Toru Naito2, Shizuka Yamazaki3, Yoshihiro Toyoshima4, Hidemichi Yuasa5 and Satoru Okada1

1Department of General Medicine, Tokyo-kita Social Insurance Hospital, Tokyo, Japan.
2Department of Geriatric Dentistry, Fukuoka Dental College, Fukuoka, Japan.
3Graduate School of Library, Information and Media Studies, University of Tsukuba, Tsukuba, Japan.
4Human Resource Department, Hibiya Employees’ Clinic, The Dai-ichi Life Insurance Company, Limited, Tokyo, Japan.
5Oral and Maxillofacial Surgery, Toyohashi Medical Center, Toyohashi, Japan.

CONCLUSIONS
The number of RCTs published in Japanese-based journals increases yearly. Japanese RCTs are becoming valuable resources for systematic reviews. Some of the Japanese RCTs are not indexed in MEDLINE®. Access to the Japanese Medical literature database may provide access to relevant research for the conduct of systematic reviews. Local language literature databases should not be neglected to collect updated study results.

BACKGROUND
Language restriction can be a problem for collecting relevant research data to conduct systematic reviews. Some Japanese language journals are indexed in MEDLINE® or other international Medical literature databases, but some are in Japanese databases only. Data from relevant randomized controlled trials in Japan may be lost due to language restrictions, if the review team does not have access to the Japanese database. The aim of this survey is to assess the number of Japanese language randomized controlled trials reported in Japanese databases compared to the number indexed in MEDLINE®.

METHODS
We conducted a comprehensive search using the term of “randomized controlled trial”, including MEDLINE®/PubMed® and ICHUSHI® from 1983 to April 2011. We counted the number and calculated the proportion of RCTs in ICHUSHI® which are linked to MEDLINE®/PubMed®.

RESULTS

**Figure 1. Number of RCTs indexed in ICHUSHI®**

Japanese-based journals included in MEDLINE® increase annually (9% in 1983 vs 15% in 2011), but are still a small proportion of the whole. 12,555 RCTs were indexed in ICHUSHI® from 1983 to April 2012. Of those, 3,160 (25.2%) were linked to MEDLINE®/PubMed®, with over 70% of RCTs indexed in ICHUSHI® not in MEDLINE®/PubMed®.

**Figure 2. Percentage of Japanese language RCTs indexed in ICHUSHI®**

Of 12,555 RCTs recorded in ICHUSHI®, 9,850 (78%) were written in Japanese, but the proportion tended to decrease to 60-70% after 2000, because the number of English language RCTs increased.

**Figure 3. Number of RCTs indexed in MEDLINE®/PubMed®**

Among 3,160 articles in ICHUSHI® which had links to MEDLINE®/PubMed®, 2,403 (76%) were “real” RCTs and were 0.8% of all RCTs in MEDLINE®/PubMed®, which included 304,223 RCTs from 1983 to April 2012.

**Figure 4. Percentage of Japanese Language RCTs indexed in both database**

635 (74%) of RCTs recorded in ICHUSHI® were written in Japanese, but it tended to decrease to less than 15% in recent years. In 2011, 627 articles were classified as RCTs in ICHUSHI®, of which only 382 (52.3%) were true RCTs, and others were not in this survey. Most RCTs in ICHUSHI® were non-inferiority studies which verified generic drugs compared to brand name drugs.