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Post-retraction citation: a case for radiology-imaging diagnostic

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ABSTRACT

Citation of a manuscript could be seen as a measure of study visibility and usefulness. Citations depends by many factors such as the subject of the article, authors (number and collaborations, authors' achievement measures), accessibility (access to the full text of the manuscript), visibility (paper length, no. of figures and tables, journal), age of the paper, methods used to make the article known (personal/academic/research pages, dedicated websites, social media), number of cited references, etc. Age of papers and citation windows are essential factors influencing citation patterns but if all publication ethics are followed is expected to have no post retraction citation or at least a proper citation of the retracted manuscript with associated retraction notice. However, when a retracted article is cited must clearly result that the paper was retracted either from the text of the paper or from the reference list. This protocol address the post retraction citation of manuscripts reporting a radiology-imaging diagnostic.

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KEYWORDS

Radiology-imaging diagnostic, Retracted article, Post retraction citation, Positive citation, Negative citation

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GUIDELINES

The study is secondary research and evaluate the scientific publication that reported a radiology-imaging diagnostic method to identify the available and eligible manuscripts as material.

Availability and Eligibility

1 Defining the search strategy

Keywords: ((diagnostic or diagnosis) and (imaging or radiology)) AND ((Retracted Publication[sb] OR Retraction of Publication[sb])) Source: PubMed Clinical Queries (<https://www.ncbi.nlm.nih.gov/pubmed/clinical>)

Restrictions: Clinical Study Categories

- Category = Diagnosis
- Scope = Broad
- Species = Humans
- Languages = English

2 Apply the search strategy and collect the retrieved titles

- When? June 15, 2017
- What was stored? The link to all retrieved articles

3 Title and abstract screening

- Where to look after the abstract? PubMed (<https://www.ncbi.nlm.nih.gov/pubmed/>) or on the journal page if no abstract was available in PubMed
- Inclusion criteria for diagnostic-related technique: radiography, radioscopy, ultrasonography (US, all types), computer tomography (CT), magnetic resonance imaging (MRI), positron emission tomography (PET), single photon emission computed tomography (SPECT), or scintigraphy
- Reason for exclusion from the analysis

Data collection

4 Data collection when eligibility passed

- year and month of publication
- the reported method of imaging diagnostic
- type of the manuscript (e.g., case report, case series, review, research article)
- journal name
- no. of authors
- authors affiliation country
- month and year of retraction
- the reason for retraction

The time from publication to retraction (months) was calculated based on collected data

Characteristics of the journal: domain and rank (whenever available; retrieved from

<https://apps.webofknowledge.com/>)

5 Citations before and after retraction: data collection

- Database searched: Scopus
- When: September 2017
- Searched by: title of the retracted article in the Reference section
- Citations: number of prior retraction citations and post retraction citations according to the month and year of retraction and respectively month and year of publication of the article citing a retracted paper.

Post retraction citations:

- link to the article citing a retracted manuscript (stored in the database in September 2017)
- eligibility: full text available, language = English, subject of the paper = humans.
- data collected: title, journal name, year, number of authors, country of the authors, type of citation (positive/negative), identified in the text or the reference as a retracted article (yes/no)
- when? September - December 2017

Whenever a post retraction citation was not included in the analysis, the reason was stored.

Data analysis

6 Variables

- Split the dataset: article that reports an ultrasound diagnostic method vs. all other imaging diagnostic method (US/non-US). We decided this split because the US examination has several advantages as compared to other

radiology-imaging diagnostic methods such as real-time examination, portability (bedside examination), low cost, harmless (no ionizing radiations), use as diagnosis method, therapeutic procedure, therapeutic follow-up, use in a lot of medical specialties. When an article reported more than one diagnostic method and one was a US method the article was included in the US group.

- Characteristics of retracted articles: type of the manuscript, JCR journal rank for Web of Science (WoS) indexed journals, number of authors, why the article was retracted, citation until and after retraction
- Calculated variables: the time from publication to retraction (expressed in months, calculated based on the month-year of publication and month-year of retraction), time from citation to retraction (expressed in years), weighted citation index (WCI, defined as the ratio between number of citations and the citation time window (no. of months/12). The WCI was calculated both for prior (WCI_{prior}) and (WCI_{post}) post retraction to analyze the dynamics of citations. Other two dichotomial variables were created to quantify if the number of post retraction citations and respectively WCI_{post} were higher as compared to those before retraction.

7 Analysis

- Normality of quantitative data was tested with Kolmogorov-Smirnov test
- Comparison between groups (US/non-US) was done with the Mann Whitney test
- Association between positive/negative post-retraction citation and diagnostic technique (US/non-US) was investigated using the Chi-square test

8 Software

- Statistical analysis was conducted with Statistica program (StatSoft USA, v. 8).
- Microsoft Excel was used for graphical representations.