

Retraction of papers authored by Yuhji Saitoh - Beyond the Fujii phenomenon

Address for correspondence:

Dr. Priyam Saikia,
Department of Anaesthesiology
and Critical Care,
Gauhati Medical College and
Hospital, Guwahati - 781 032,
Assam, India.
E-mail: saikia.priyam80@gmail.
com

Priyam Saikia, Bandana Thakuria¹

Department of Anaesthesiology and Critical Care, Gauhati Medical College, Guwahati, ¹Department of Microbiology, Jorhat Medical College and Hospital, Jorhat, Assam, India

ABSTRACT

Background and Aims: Various aspects of retracted articles authored by Yoshitaka Fujii and their retraction notices have been examined. Yuhji Saitoh has coauthored many articles with Yoshitaka Fujii which were subsequently retracted. Japanese Society of Anesthesiology (JSA) recommends retraction of various articles by Yuhji Saitoh, but various attributes of those and their retraction notices have not been examined. **Methods:** A list of retracted articles was retrieved from PubMed, Retraction Watch Database and relevant journals. Their retraction notices were obtained from the journal's webpage. Predefined characteristics of the retracted articles and their retraction notices were evaluated against those proposed by Committee on Publication Ethics (COPE). **Results:** Fifteen such articles were retracted. Two of them were not identified as retracted in the journal webpage. Half of the papers mentioned by JSA are yet to be retracted. Among those retracted, only 13.3% retraction notices were in line with the guidelines published by the COPE. Two retracted articles are yet to be flagged as retracted in PubMed. The median (interquartile range) time required for retraction from the date of declaration of being eligible for retraction is 14 (3) months. Data were analysed with Microsoft Excel™ (2007). **Conclusion:** Even after more than 1 year of recommendation, many articles containing evidence of scientific misconduct are yet to be retracted. Among those retracted, the relevant authority failed to follow the prevalent and well-regarded standards of ethics in scholarly publication.

Key words: Committee on Publication Ethics, research misconduct, retraction notice, retracted publication

Access this article online

Website: www.ijaweb.org

DOI: 10.4103/ija.IJA_267_19

Quick response code



INTRODUCTION

Speedy retraction of fraudulent research and transparency of the whole process cannot be overemphasised. The Committee on Publication Ethics (COPE) has taken major initiatives to systematically approach this issue. But the credibility of the scientific community is under the shadow of the ever-growing phenomenon of research misconduct. Thus, there is an urgent need to understand different aspects of this phenomenon. Researchers have started to look into various characteristics of retracted articles and their retraction notices in the context of guidelines proposed by COPE.^[1]

Four anaesthesiologists, namely, Yoshitaka Fujii, Yuhji Saitoh, Joachim Boldt and Scott Reuben, are well-known researchers with highest numbers of articles retracted for research misconduct.^[2] In fact, Yoshitaka Fujii

leads the board. Yuhji Saitoh has coauthored frequently with him in many of those retracted articles. Except Yuhji Saitoh, the misdemeanour of the other three researchers has been discussed at length in peer-reviewed literature and received widespread media coverage.^[3-5]

Although Yuhji Saitoh was a frequent coauthor with Yoshitaka Fujii, statistical analysis by Carlisle and Loadsman cast doubt about data integrity in many

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Saikia P, Thakuria B. Retraction of papers authored by Yuhji Saitoh – Beyond the Fujii phenomenon. *Indian J Anaesth* 2019;63:571-84.

articles by Yuhji Saitoh in which Yoshitaka Fujii was not a coauthor.^[6] An investigation by Japanese Society of Anesthesiology (JSA) in to the accusation of fraud in articles by Yuhji Saitoh has recommended retraction of 10 papers and Yushitaka Fujii was not a coauthor in any of them.^[7] Therefore, there is a need for close scrutiny of retraction of research by Yuhji Saitoh in which Yoshitaka Fujii was not a coauthor.

Thus, we aimed to analyse various characteristics of such retracted articles and their retraction notices in the context of guidelines proposed by COPE. We also aimed to examine the status of the articles mentioned in the report of JSA and Carlisle and Loadman [Online Appendix S2: references, part 1].^[6,7]

METHODS

We searched PubMed to retrieve ‘Retracted Publications’ authored by Saitoh Y that does not include Fujii Y as a coauthor (Search Strategy ((Retracted Publication[Publication Type]) AND Saitoh Y[Author]) NOT Fujii Y[Author]). Similarly, data about the Publication Type ‘Retraction of Publication’ was retrieved (Search Strategy Search strategy (Retraction of Publication[Publication Type]) AND Saitoh Y[Author]). ‘Author’ field of the Retraction Watch Database was inquired with the last name Saitoh. From the suggestions listed by the database, we chose the author name Saitoh, Yuhji. Among the results displayed, papers authored by Yuhji Saitoh in which Yoshitaka Fujii was not a coauthor were chosen.

We visited the webpages of the journals which published the articles retrieved from the previous two searches. The retraction notices and the retracted articles were subsequently downloaded. The webpage of COPE was searched to find out whether the journals containing retracted articles or articles eligible for retraction were members of COPE.^[8] An article was regarded as eligible for retraction if it was mentioned in the appendix of the investigation report of the JSA.^[7] If they were not members of COPE, we planned to search the webpage of the relevant journal to find out whether COPE is referred to in their journal-related information sheet. Retraction notices were evaluated against the criteria for retraction notices endorsed by COPE [Table 1]. We also evaluated whether the PDF versions of the retracted papers are watermarked.^[1]

We also observed whether the articles that were found to have violated ethics by investigation by JSA are

Table 1: Committee on Publication Ethics guideline for retraction notices and retracted articles^[1,9]

Type of document	Parameters for evaluation
Retraction notice	Whether freely available to all readers Whether the notice is clearly identified as a retraction Whether clearly identify the retracted article (We considered it to be clearly identifying the retracted article if the heading contained either title of the article or details of journal name with issue, volume, and page information OR name of author with any one of the previous two) Mention the reason(s) behind the decision to retract Mention who is retracting the article Whether it is linked to the retracted article in case of electronic version
Retracted article	Whether it is still available in the electronic archive Whether it is identified as retracted on the webpage of the journal and PubMed

retracted.^[7] The list of articles examined by Carlisle and Loadman was retrieved and we investigated whether any of those were retracted.^[6] We emailed the Editor of the journals that were yet to retract articles mentioned in the report by JSA.

Although the report about possible research misconduct in certain papers authored by Yuhji Saitoh was published in 18th December 2016, we defined the date of eligibility for retraction as 25th September 2017 (date on which the investigation report by JSA was published).^[6,10] Time duration taken for retraction was defined as the duration between date of eligibility for retraction and date of electronic publication (ahead of print) of its retraction notice. If it was not available, the first day of the month of its print publication was considered. We defined ‘life time of the retracted articles’ as the time duration between the date of publication and retraction. For calculation of the time durations, only the number of months was considered (e.g., if the duration was 162 months and 26 days, it was considered as 162 months).

All the electronic searches and email contacts were carried out on 5/1/2019 and relevant documents downloaded by the first author. Again on 6/1/2019, the search was repeated by the first author. The second author carried out the search on 7/1/2019 independently. Data were analysed with Microsoft Excel™ (2007), USA. Kaplan–Meier survival curve was generated with a freely available online software (<http://eurekastatistics.com/kaplan-meier-survival-curve-grapher/>).

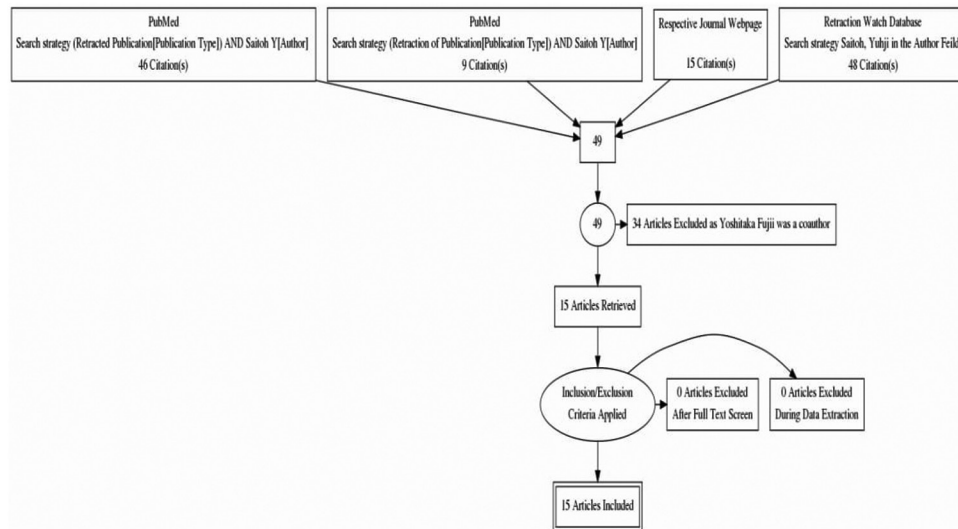


Figure 1: Flow diagram of selection of retracted articles and retraction notices

RESULTS

The search strategy used with results is mentioned in Figure 1. Among the citations retrieved from Retraction Watch Database, 15 papers met inclusion criteria. All the citations retrieved from PubMed (13 numbers) were included in Retraction Watch Database. We gathered another retracted article from individual journal webpage search. Both these additional papers are available in PubMed, but none was flagged as retracted.

Eight journals published all the retracted or articles eligible for retraction. Seven were members of COPE. No reference to COPE could be found in the webpage of the remaining journal. Only 2 (13%) retraction notices complied with all the parameters mentioned in Table 1 [Appendix 1]. Detailed analyses of the retracted articles and retraction notices are available in Table 2 [Appendix 1]. Watermark demonstrating the retracted status of the paper was not present on 4 (26.6%) papers [Appendix 1].

All the retracted articles were available in the journal webpage, but 2 (13.3%) of them were not identified as retracted [Appendix 2]. The PDF version of these two articles was also not watermarked, and both were published by one journal. Among the 13 articles identified as retracted, the PDF of version of 2 (15.3%) articles was not watermarked. Although not watermarked, the retraction notice was made available along with the article in the PDF version of another article. Two retracted articles were not flagged as retracted in PubMed [Appendix 2]. Although JSA

recommended for retraction, 5 (50%) articles were not retracted till the day of our search.^[7] Among the 32 papers analyzed by Carlisle and Loadman, one was not published.^[6] Among those 31 published papers, 22 met our inclusion criteria and 10 among those have been retracted [Appendix 2].

Two articles were retracted prior to publication of the report by JSA, and in one the date of retraction could not be determined [Appendix 1]. The median [interquartile range (IQR)] time required for retraction from the date of declaration of being eligible for retraction is 14 (3) months. Kaplan–Meier survival curve with 95% confidence interval for the time from eligibility to actual retraction are presented in Figure 2. The median (IQR) of the lifetime of the retracted article is 234 (128) months.

Two journals contained articles deemed eligible for retraction by JSA but not retracted till 07/1/2019.^[7] One journal is yet to respond to our email. The Editor-in-Chief of the other journal informed that ‘the mail from JSA recommending the retraction of the article had not been forwarded to the editor-in-chief until the end of the last year due to administrative error’ and they have ‘just started appropriate procedures’. This article was subsequently retracted 3 months after our email to the journal editor. This retraction notice was not included in the results mentioned above.

DISCUSSION

We observed that although eligible for retraction, half of the papers are yet to be retracted and only 13.3%

Table 2: Conformity of retracted articles and retraction notices with parameters evaluated^[1,9] [Appendix 1]

Parameters evaluated		Absolute number (proportion)	Remarks
Retraction notice	Freely available to all readers	15 (100%)	
	Notice is clearly identified as a retraction	15 (100%)	
	Clearly identify the retracted article	11 (73.3%)	Eight notices included author name, title, and other citation details Three notices mentioned only the title Three notices headline do not mention any information on which article is being retracted One notice was published on the page displaying the retracted article and did not have any heading
	Mentions the reason(s) behind the decision to retract	14 (93.3%)	
Retracted article	Mention who is retracting the article	15 (100%)	
	It is linked to the retracted article in case of electronic version	4 (26.6%)	One notice was published with the retracted article
	Available in the electronic archive	15 (100%)	
	Identified as retracted on the webpage of the journal and bibliographic databases	12 (80%)	
	Identified as retracted on bibliographic databases	13 (86.6%)	
	PDF version is watermarked	11 (73.3%)	The PDF version of these two articles was also not water marked, and they were published by one journal. Among the 13 articles identified as retracted, the PDF of version of 2 (15.3%) articles were not watermarked. Though not watermarked, the retraction notice was made available along with the article in the PDF version of another article

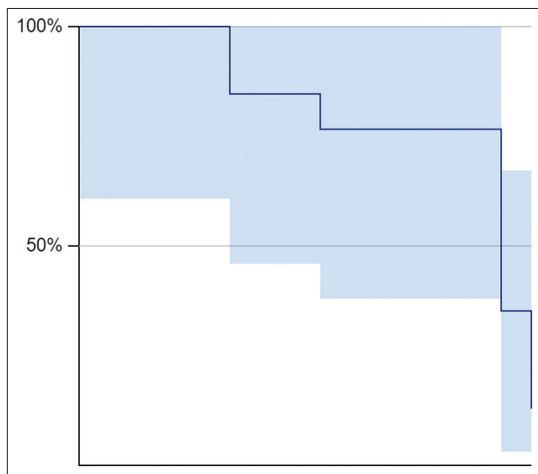


Figure 2: Kaplan–Meier survival curve with 95% confidence interval of the time from eligibility to actual retraction of papers by Yuhji Saitoh without Yoshitaka Fujii as a coauthor

retraction notices complied with the recommendations of COPE.

It is the responsibility of the scientific community to uphold the benchmark of ethics in science. Retraction is the only way to purge fraudulent researches, and a uniform retraction policy ensures its accuracy and relevance. But retraction policies of journal are not uniform.^[11,12] Absence of external or internal guidance may be some of the reasons for disparities in retraction

policies.^[11] The first guideline by COPE for retraction was published in 2009.^[11] Although many journals lack a defined retraction policy, it is heartening to find that the number of journals with defined retraction policies is on the rise.^[12] COPE, describing the code of conduct for journal editor, mentions that they should ‘always be willing to publish corrections, clarifications, retractions and apologies when needed’.^[13] The COPE expects its members to follow it. But there may be many reasons why an editor may be reluctant to retract.^[14]

There are many intricacies and obstructions to initiate investigations of suspected research misconduct and its subsequent retraction.^[15,16] In our study, the prompt response by one journal is assuring, and it revealed that possible administrative issues in the editorial office may also hinder retraction. The keenness of a substantial number of journal editors and publishers to respond and act accordingly to queries about non-retraction of fraudulent research is encouraging.^[1] We sincerely wished to receive some feedback from the journal editor of the other journal so as to have some more insight into the reason(s) for non-retraction of fraudulent research. JSA has urged ‘respective journals to make retractions or take any other actions they deem necessary’.^[7] These non-retractions reinforce the fact that that there is yet no mechanism

that ensures retraction of article that warrants it.^[17] In fact, many journal editors may be 'unaware of the need for retraction' of research deemed eligible for retraction.^[1] The retraction of hundreds of papers tainted with scientific misconduct is welcome, but relevant organisations should construct mechanisms that mend the gap between report of investigative agency, the concerned journals and other stakeholders. We suggest that all the stakeholders must develop a common protocol to follow if any authoritative agency finds evidence of research misconduct. There must be mechanism to evaluate if that protocol is being followed. We expect COPE to take the lead.

Standardised retraction notices ensure complete and transparent information about retracted article. Across different specialties, sizeable numbers of retraction notices do not comply with the guidelines of COPE.^[1,18,19] Except one, all the journals evaluated in our study are members of COPE. It is disconcerting that even being a member, a majority of retraction notices failed to comply the guidelines of COPE.

The better a database is in tracking retraction notices, the more easily retracted article can be identified.^[19] We observed that search strategy using the name of author and the Publication Type Retraction of Publication failed to retrieve many relevant data. COPE suggests the use of name of author and title of the article in the heading of the retraction notice.^[9] We believe that an unambiguous recommendation by COPE to use both will make retraction notices more visible in PubMed. Two of the retracted papers were not flagged by PubMed. Late indexation of retraction notices is known and it should be kept in mind while using PubMed.^[20]

A retracted paper is no longer a part of human knowledge. But in many instances, such articles get citations, many being positive citations.^[19,21] Such instances have tremendous ramifications.^[22] Identification of retracted material is of unconditional importance. It is alarming that 20% articles were not identified as retracted in journal webpage or in PubMed. The widespread use of electronic devices increases the chance of unsuspecting authors to cite retracted article if it is not flagged in the journal webpage, electronic databases or lack of watermark in the PDF version.^[1]

We observed that the time from eligibility to actual retraction is lower than those for Fujii, Boldt and Reuben.^[1] But it must be noted that many articles are still not retracted. The long duration taken for

retraction from publication is notable. Science purges the fraudulent papers, but takes time. This time lag pollutes the literature and negates the very essence of science. This needs to be changed. Although the method proposed by Carlisle has generated debate, its application during review process is one courageous step.^[23,24]

We would like to mention a few limitations of our study. The methodology used by Retraction Watch Database to collect information on retracted publication is not in public domain. Moreover, only a subset of journals is abstracted in PubMed and we searched the webpages of only those journals that have published either retracted publications or randomised trials with probable ethics violation. There must have been journals that published other types of paper by Yuhji Saitoh.

CONCLUSION

Not all the papers authored by Yuhji Saitoh without Yoshitaka Fujii as a coauthor have been retracted. Among those retracted, many do not conform to the guideline set by COPE. There is a vast scope to improve the process of handling research that breaches ethics of scientific scholarly publications.

Acknowledgement

The authors thank Mr. Nayanmoni Sarma, Lecturer, Department of English, Brilliant Academy, Mangaldai, Assam, for language editing.

Authors would also like to acknowledge that views expressed in the submitted article are his or her own and not an official position of the institution.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. McHugh UM, Yentis SM. An analysis of retractions of papers authored by Scott Reuben, Joachim Boldt and Yoshitaka Fujii. *Anaesthesia* 2019;74:17-21.
2. The Retraction Watch Leaderboard, 2019. Available from: <https://retractionwatch.com/the-retraction-watch-leaderboard/>. [Last accessed on 2019 Apr 05].
3. White PF, Rosow CE, Shafer SL. The Scott Reuben saga: One last retraction. *Anesth Analg* 2011;112:512-5.
4. Harsoor SS, Gangadhar SB. Fraud in anaesthetic research and publication. *Indian J Anaesth* 2012;56:1-3.
5. Kranke P. Putting the record straight: Granisetron's efficacy as

- an antiemetic 'post-Fujii'. *Anaesthesia* 2012;67:1063-7.
6. Carlisle JB, Loadman JA. Evidence for non-random sampling in randomised, controlled trials by Yuhji Saitoh. *Anaesthesia* 2017;72:17-27.
 7. Investigation report regarding allegations of fraud in articles by Yuhji Saitoh, 2017. Available from: <http://www.anesth.or.jp/english/pdf/news20170925.pdf>. [Last accessed on 2019 Jan 05].
 8. Membership, 2019. Available from: <https://publicationethics.org/membership>. [Last accessed on 2019 Jan 05].
 9. Retraction Guidelines. Available from: https://publicationethics.org/files/retraction%20guidelines_0.pdf. [Last accessed on 2019 Jan 05].
 10. Headline News. Available from: <http://www.anesth.or.jp/english/>. [Last accessed on 2019 Jan 05].
 11. Wager E, Williams P. Why and how do journals retract articles? An analysis of Medline retractions 1988-2008. *J Med Ethics* 2011;37:567-70.
 12. Resnik DB, Wager E, Kissling GE. Retraction policies of top scientific journals ranked by impact factor. *J Med Libr Assoc* 2015;103:136-9.
 13. COPE Code of Conduct, 2008. Available from: <https://publicationethics.org/files/2008%20Code%20of%20Conduct.pdf>. [Last accessed on 2019 Jan 08].
 14. Williams P, Wager E. Exploring why and how journal editors retract articles: Findings from a qualitative study. *Sci Eng Ethics* 2013;19:1-11.
 15. Sox HC, Rennie D. Research misconduct, retraction, and cleansing the medical literature: Lessons from the Poehlman case. *Ann Intern Med* 2006;144:609-13.
 16. Wager E. Who is responsible for investigating suspected research misconduct? *Anaesthesia* 2012;67:462-6.
 17. Elia N, Wager E, Tramèr MR. Fate of articles that warranted retraction due to ethical concerns: A descriptive cross-sectional study. *PLoS One* 2014;9:e85846.
 18. Balhara YP, Mishra A. Compliance of retraction notices for retracted articles on mental disorders with COPE guidelines on retraction. *Curr Sci* 2014;107:757-60.
 19. Ajiferuke I, Adekannbi JO. Correction and retraction practices in library and information science journals. *J Librar Inform Sci* 2018;0961000618785408.
 20. Decullier E, Huot L, Maisonneuve H. What time-lag for a retraction search on PubMed? *BMC Res Notes* 2014;7:395.
 21. Bar-Ilan J, Halevi G. Post retraction citations in context: A case study. *Scientometrics* 2017;113:547-65.
 22. Da Silva JA, Bornemann-Cimenti H. Why do some retracted papers continue to be cited? *Scientometrics* 2017;110:365-70.
 23. Mascha EJ, Vetter TR, Pittet JF. An appraisal of the Carlisle-Stouffer-Fisher method for assessing study data integrity and fraud. *Anesth Analg* 2017;125:1381-5.
 24. Miller DR. Probability screening in manuscripts submitted to biomedical journals – An effective tool or a statistical quagmire? *Anaesthesia* 2015;70:765-8.

APPENDICES

Appendix 1: A spreadsheet of retracted articles by Yuhji Saitoh, details of notices of retraction, their conformance with parameters in Table 1, and the presence of a watermark

Title	Authors	Citation	Member of COPE	Included in the recommendations for retraction by Japanese Society of Anesthesiologists	Included in the Appendix S2 by Carlisle	Whether marked in PubMed	Published on	When retracted online	When retracted in print	Duration from eligibility to retraction	Duration considered for statistical analysis
Reversal of vecuronium with neostigmine in patients with diabetes mellitus	Saitoh Y, Hattori H, Sanbe N, Nakajima H, Akatu M, Murakawa M.	Anaesthesia. 2004 Aug; 59 (8):750-4.	Yes	Yes	Yes	Marked	Aug-04	2/27/2018	Apr-18	Duration from eligibility to retraction	5
The effect of ulinastatin pre-treatment on vecuronium-induced neuromuscular block in patients with hepatic cirrhosis	Saitoh Y, Kaneda K, Murakawa M.	Anaesthesia. 2002 Mar; 57 (3):218-22.	No	No	Yes	Marked, but link to the retraction does not work	Mar-02	2/27/2018	Apr-18	Duration from eligibility to retraction	5
Evaluation of Residual Neuromuscular Block Using Train-of-Four and Double Burst Stimulation at the Index Finger	Saitoh Y, Nakazawa K, Makita K, Tanaka H, Amaha K.	Anesth Analg. 1997 Jun; 84 (6):1354-8.	Yes	No	Yes	No	Jun-97		Jan-19	Duration from eligibility to retraction	15
Visual evaluation of train-of-four and double burst stimulation, fade at various currents, using a rubber band	Saitoh Y, Nakazawa K, Makita K, Tanaka H, Toyooka H.	Eur J Anaesthesiol. 1997 May; 14 (3):327-32	Yes	No	Yes	Marked	May-97		Jan-19	Duration from eligibility to retraction	15
Effect of tetanic stimulation on subsequent train-of-four responses at various levels of vecuronium-induced neuromuscular block	Saitoh Y, Masuda A, Toyooka H, Amaha K.	Br J Anaesth. 1994 Sep; 73 (3):416-7	Yes	No	No	Marked	Sep-94	11/29/2018	Jan-19	Duration from eligibility to retraction	14
Infusion of amino acid enriched solution hastens recovery from neuromuscular block caused by vecuronium	Saitoh Y, Kaneda K, Tokunaga Y, Murakawa M.	Br J Anaesth. 2001 Jun; 86 (6):814-21.	No	No	Yes	Marked	Jun-01	11/29/2018	Jan-19	Duration from eligibility to retraction	14
Monitoring of neuromuscular block after administration of vecuronium in patients with diabetes mellitus	Saitoh Y, Kaneda K, Hattori H, Nakajima H, Murakawa M.	Br J Anaesth. 2003 Apr; 90 (4):480-6.	Yes	Yes	Yes	Marked	Apr-03	11/29/2018	Jan-19	Duration from eligibility to retraction	14

	Saitoh Y, Toyooka H, Amaha K.	Br J Anaesth. 1995 Mar; 74 (3):293-5.	No	Yes	Marked	Mar-95	11/29/2018	Jan-19	Duration from eligibility to retraction	14
Post-tetanic burst: a new monitoring method for intense neuromuscular block	Saitoh Y, Toyooka H, Amaha K.	Br J Anaesth. 1995 Mar; 74 (3):293-5.	No	Yes	Marked	Mar-95	11/29/2018	Jan-19	Duration from eligibility to retraction	14
Post-tetanic count and single twitch height at the onset of reflex movement after administration of vecuronium under different types of anaesthesia	Saitoh Y, Kaneda K, Toyooka H, Amaha K.	Br J Anaesth. 1994 Jun; 72 (6):688-90.	No	No	Marked	Jun-94	11/29/2018	Jan-19	Duration from eligibility to retraction	14
Recoveries of post-tetanic twitch and train-of-four responses after administration of vecuronium with different inhalation anaesthetics and neuroleptanaesthesia.	Saitoh Y, Toyooka H, Amaha K.	Br J Anaesth. 1993 Apr; 70 (4):402-4.	Yes	Yes	Marked	Apr-93	11/29/2018	Jan-18	Duration from eligibility to retraction	14
Relationship between post-tetanic twitch and single twitchresponse after administration of vecuronium.	Saitoh Y, Toyooka H, Amaha K.	Br J Anaesth. 1993 Sep; 71 (3):443-4.	No	No	Marked	Sep-93	11/29/2018	Jan-19	Duration from eligibility to retraction	14
Effects of olprinone on neuromuscular blockade caused by vecuronium.	Katayama T, Saitoh Y, Nemoto C, Hirama T, Isosu T, Murakawa M.	Fukushima J Med Sci. 2007 Dec; 53 (2):61-9.	No	Yes	Marked	Dec-07		Jul-17		NA
Monitoring of vecuronium-induced neuromuscular block at the sternocleidomastoid muscle in anesthetized patients	Saitoh Y, Oshima T, Nakata Y.	J Anesth. 2010 Dec; 24 (6):838-44.	Yes	Not in those 32, but in the other lists	Marked	Dec-10	6/22/2018	Aug-18	8 months 28 days	8
Assessment of neuromuscular block at the orbicularis oris, corrugator supercilii, and adductor pollicis muscles.	Saitoh Y, Sashiyama H, Oshima T, Nakata Y, Sato J.	J Anesth. 2012 Feb; 26 (1):28-33	No	Yes	Marked	Feb-12	8/11/2016	Dec-16		NA
Visual evaluation of fade in response to facial nerve stimulationat the eyelid.	Hattori H, Saitoh Y, Nakajima H, Sanbe N, Akatu M, Murakawa M.	J Clin Anesth. 2005 Jun; 17 (4):276-80.	No	Yes	No	Jun-05				

Title	Duration from publication to retraction	Retracted article available in electronic archive	Retracted article identified as retracted on the webpage of the journal	Retracted article Watermarked in the PDF version	Retraction notice freely available to all readers	Retraction notice clearly identified as a retraction	Retraction notice clearly identify the retracted article	Retraction notice	Retraction notice	Retraction notice	Retraction notice	
Reversal of vecuronium with neostigmine in patients with diabetes mellitus	162 months 26 days	Yes	Yes	Yes	Yes	Yes	The retraction notice headline does not mention either the title or the names of the authors. But the text of the notice mentions these details	Clearly identify the retracted article	Mention the reason (s) behind the decision to retract	Mention who is retracting the article	Whether it is linked to the retracted article in case of electronic version	
The effect of ulinastatin pre-treatment on vecuronium-induced neuromuscular block in patients with hepatic cirrhosis	191 months 26 days	Yes	Yes	Yes	Yes	Yes	The retraction notice headline does not mention either the title or the names of the authors. But the text of the notice mentions these details	Clearly identify the retracted article	Non-submission of research study for ethical approval before undertaking research.	By agreement between the authors, the journal Editor in Chief, Dr A. Klein and John Wiley & Sons.	Yes	
Evaluation of Residual Neuromuscular Block Using Train-of-Four and Double Burst Stimulation at the Index Finger	259 months	Yes	No	No	Yes, but the webpage says that it can be bought.	Yes	The retraction heading mentions the title of the article but does not include the name of the authors. But the citation details of the retracted article is included in the text of the notice	Clearly identify the retracted article	Non-submission of research study for ethical approval before undertaking research and concerns about the data	Yuhji Saitoh has personally admitted that the study did not receive prior approval from the Committee of Human Research of Tokyo Medical and Dental University in Japan, despite the statement provided within the articles methods section.	By agreement between the authors, the journal Editor in Chief, Dr A. Klein and John Wiley & Sons	No
Visual evaluation of train-of-four and double burst stimulation, fade at various currents, using a rubber band	260 months	Yes	No	No	Yes	Yes	Yes, the title and name of authors are included	Clearly identify the retracted article	As the first author has informed us that the clinical investigation described in the article was undertaken without formal approval of the Institutional Review Board. In addition, the informed consent for the protection of personal information was ignored.	Editor-in-Chief	No	

	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Editor-in-Chief	No
Effect of tetanic stimulation on subsequent train-of-four responses at various levels of vecuronium-induced neuromuscular block	290 months	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y Saitoh provided a statement in a personal communication to a member of the editorial board of British Journal of Anaesthesia that the study was not approved by the Institutional Review Board and that no evidence exists to support the study findings.	Editor-in-Chief	No
Infusion of amino acid enriched solution hastens recovery from neuromuscular block caused by vecuronium	209 months	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Statistical analysis suggests that the data may be fabricated. Y Saitoh provided a statement in a personal communication to a member of the editorial board of British Journal of Anaesthesia that the study was not approved by the Institutional Review Board and that no evidence exists to support the study findings.	Editor-in-Chief	No
Monitoring of neuromuscular block after administration of vecuronium in patients with diabetes mellitus	187 months	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Statistical analysis suggests that the data may be fabricated. Y Saitoh provided a statement in a personal communication to a member of the editorial board of British Journal of Anaesthesia that the study was not approved by the Institutional Review Board and that no evidence exists to support the study findings.	Editor-in-Chief	No
Post-tetanic burst: a new monitoring method for intense neuromuscular block	284 months	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Statistical analysis suggests that the data may be fabricated. Y Saitoh provided a statement in a personal communication to a member of the editorial board of British Journal of Anaesthesia that the study was not approved by the Institutional Review Board and that no evidence exists to support the study findings. Additionally, the Japanese Society of Anesthesiologists has recommended retraction of this article: http://www.anesth.or.jp/english/pdf/news20170925.pdf .	Editor-in-Chief	No

	293 months 28 days	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Y Saitoh provided a statement in a personal communication to a member of the editorial board of British Journal of Anaesthesia that the study was not approved by the Institutional Review Board and that no evidence exists to support the study findings.	Editor-in-Chief	No
Post-tetanic count and single twitch height at the onset of reflex movement after administration of vecuronium under different types of anaesthesia	293 months 28 days	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes, the title and citation details are available in the heading , but name of authors are not included. The name of the authors are included as authors in the retraction notice in PubMed	Editor-in-Chief	No
Recoveries of post-tetanic twitch and train-of-four responses after administration of vecuronium with different inhalation anaesthetics and neurolept anaesthesia	307 months 28 days	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Statistical analysis suggests that the data may be fabricated. Y Saitoh provided a statement in a personal communication to a member of the editorial board of British Journal of Anaesthesia that the study was not approved by the Institutional Review Board and that no evidence exists to support the study findings. Additionally, the Japanese Society of Anesthesiologists has recommended retraction of this article: http://www.anesth.or.jp/english/pdf/news20170925.pdf .	Editor-in-Chief	No
Relationship between post-tetanic twitch and single twitch response after administration of vecuronium.	302 months 28 days	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes, the title and citation details are available in the heading , but name of authors are not included. The name of the authors are included as authors in the retraction notice in PubMed	Editor-in-Chief	No
Effects of olprinone on neuromuscular blockade caused by vecuronium.	115 months	Yes	Yes	Not watermarked, but the retraction notice is included in the PDF version of the retracted article	Yes	Yes	Yes	Yes	Yes	The retraction notice headline does not mention either the title or the name of the authors. But the text of the notice mentions these details	Editorial Committee, Fukushima Medical Society	No

	90 months	Yes	Yes	No	Yes	Yes	Yes	The retraction heading mentions the title of the article but does not include the name of the authors. But the citation details of the retracted article is included in the text of the notice	Because the study described in this article was undertaken without appropriate patient consent. The journal was notified of this by The Japanese Society of Anesthesiologists (JSA) Special Investigation Committee [2]. Y. Nakata agrees with this retraction. Y. Saitoh and T. Oshima did not respond to correspondence from the publisher concerning this retraction.	Editor-in-Chief, in agreement with the journal's Editorial Board	Yes
Monitoring of vecuronium-induced neuromuscular block at the sternocleidomastoid muscle in anesthetized patients	21 days	Yes	Yes	No	Yes	Yes	Yes				
Assessment of neuromuscular block at the orbicularis oris, corrugator supercilli, and adductor pollicis muscles.	54 months 10 days	Yes	Yes	No	Yes	Yes	Yes	The retraction heading mentions the title of the article but does not include the name of the authors. But the citation details of the retracted article is included in the text of the notice	As a result of notice received from the author, that the study described in the article was undertaken without appropriate patient consent.	Editor-in-chief	Yes
Visual evaluation of fade in response to facial nerve stimulation at the eyelid.		Yes	Yes	Yes	Yes, the notice is available on the webpage for the retracted article. It has not been published as a separate retraction notice in a subsequent issue. Thus we couldn't determine the day of retraction	Yes	Yes		Several pieces of data were fabricated or falsified in the article.	Editor-in-Chief	

Appendix 2: A document mentioning retracted articles by Yuhji Saitoh retracted but not identified as retracted in journal webpage and PubMed, eligible for retraction but not retracted and mentioned in the list by Carlisle *et al.* but not retracted

- a) Articles not identified as retracted on journal webpage-
1. Saitoh Y, Nakazawa K, Makita K, Tanaka H, Toyooka H. Visual evaluation of train-of-four and double burst stimulation, fade at various currents, using a rubber band. *Eur J Anaesthesiol.* 1997 May;14(3):327-32.
 2. Saitoh Y, Nakazawa K, Makita K, Tanaka H, Amaha K. Evaluation of Residual Neuromuscular Block Using Train-of-Four and Double Burst Stimulation at the Index Finger. *Anesth Analg.* 1997 Jun;84(6):1354-8.
- b) Articles not identified as retracted in PubMed
1. Saitoh Y, Nakazawa K, Makita K, Tanaka H, Amaha K. Evaluation of Residual Neuromuscular Block Using Train-of-Four and Double Burst Stimulation at the Index Finger. *Anesth Analg.* 1997 Jun;84(6):1354-8.
 2. Hattori H, Saitoh Y, Nakajima H, Sanbe N, Akatu M, Murakawa M. Visual evaluation of fade in response to facial nerve stimulation at the eyelid. *J Clin Anesth.* 2005 Jun;17(4):276-80.
- c) List of articles that were recommended to be retracted by Japanese Society of Anesthesiologists but not retracted⁶
1. Saitoh Y, Tanaka H, Toyooka H, Amaha K. Recovery of post-tetanic and train-of-four responses at the first dorsal interosseous and adductor pollicis muscles in patients receiving vecuronium. *Can J Anaesth.* 1996 Apr;43(4):362-7.
 2. Saitoh Y, Koitabashi Y, Makita K, Tanaka H, Amaha K. Train-of-four and double burst stimulation fade at the great toe and thumb. *Can J Anaesth.* 1997 Apr;44(4):390-5.
 3. Saitoh Y, Nakajima H, Hattori H, Aoki K, Katayama T, Murakawa M. Neuromuscular blockade can be assessed accelerographically over the vastus medialis muscle in patients positioned prone. *Can J Anaesth.* 2003 Apr;50(4):342-7.
 4. Saitoh Y, Hattori H, Sanbe N, Nakajima H, Akatu M, Murakawa M. Delayed recovery of vecuronium neuromuscular block in diabetic patients during sevoflurane anesthesia. *Can J Anaesth.* 2005 May;52(5):467-73.
 5. Saitoh Y, Aoki K, Okazaki M, Hiramata T, Isosu T, Murakawa M. Reversal of vecuronium with neostigmine: a comparison between male and female patients. *Fukushima J Med Sci.* 2009 Dec;55(2):61-70.
- d) List of articles mentioned by Carlisle *et al* and not retracted⁵
1. Saitoh Y, Nakazawa K, Toyooka H, Amaha K. Optimal stimulating current for train-of-four stimulation in conscious subjects. *Can J Anaesth.* 1995 Nov;42(11):992-5.
 2. Saitoh Y, Tanaka H, Toyooka H, Amaha K. Recovery of post-tetanic and train-of-four responses at the first dorsal interosseous and adductor pollicis muscles in patients receiving vecuronium. *Can J Anaesth.* 1996 Apr;43(4):362-7.
 3. Saitoh Y, Nakazawa K, Makita K, Tanaka H, Toyooka H. Evaluation of residual neuromuscular blockade using modified double burst stimulation. *Acta Anaesthesiol Scand.* 1997 Jun;41(6):741-5.
 4. Saitoh Y, Koitabashi Y, Makita K, Tanaka H, Amaha K. Train-of-four and double burst stimulation fade at the great toe and thumb. *Can J Anaesth.* 1997 Apr;44(4):390-5.
 5. Oshima T, Kasuya Y, Terazawa E, Nagase K, Saitoh Y, Dohi S. The anxiolytic effects of the 5-hydroxytryptamine-1A agonist tandospirone before otolaryngologic surgery. *Anesth Analg.* 2001 Nov;93(5):1214-6.
 6. Saitoh Y, Kaneda K, Murakawa M. Onset of vecuronium-induced neuromuscular block after a long priming interval. *J Anesth.* 2002;16(2):102-7.
 7. Nakajima H, Hattori H, Aoki K, Katayama T, Saitoh Y, Murakawa M. Effect of milrinone on

- vecuronium-induced neuromuscular block. *Anaesthesia*. 2003 Jul;58(7):643-6.
8. Saitoh Y, Nakajima H, Hattori H, Aoki K, Katayama T, Murakawa M. Neuromuscular blockade can be assessed accelerographically over the vastus medialis muscle in patients positioned prone. *Can J Anaesth*. 2003 Apr;50(4):342-7.
 9. Saitoh Y, Hattori H, Sanbe N, Nakajima H, Akatu M, Murakawa M. Delayed recovery of vecuronium neuromuscular block in diabetic patients during sevoflurane anesthesia. *Can J Anaesth*. 2005 May;52(5):467-73.
 10. Hattori H, Saitoh Y, Nakajima H, Sanbe N, Akatu M, Murakawa M. Gabexate mesilate hastens recovery from vecuronium-induced neuromuscular blockade. *Eur J Anaesthesiol*. 2005 Jan;22(1):20-4.
 11. Oshima T, Murakami T, Saitoh Y, Yokota M, Kasuya Y. Inhibitory effects of landiolol and nicardipine on thiopental-induced yawning in humans. *J Anesth*. 2010 Apr;24(2):168-72.
 12. Saitoh Y, Oshima T, Nakata Y. Acceleromyographic monitoring of neuromuscular block over the orbicularis oris muscle in anesthetized patients receiving vecuronium. *J Clin Anesth*. 2010 Aug;22(5):318-23.