Publications Malpractices: The worrying Trends

Medical publications, journals and textbooks are all based on one basic assumption, the integrity of ethics of the authors. Recent outburst in number of publications has also increased the number of malpractices. Websites like retraction watch feature a lot of articles and reasons for retractions [1], but I believe they are scratching just the tip of the iceberg. Also clinical journals like in field of orthopaedics are mostly neglected by these sentinel websites probably due to lack of resources and focus on more highly reputed journals.

The incidences of malpractices in higher journals have more impact on the literature and practices however it is less common. Malpractices in lower journals are often ignored completely even by the editorial staff and many articles of questionable integrity get published. Also there is issue of predatory journals that completely ignore the ethics and quality part of the article and simply focus on the financial importance of the articles [2]. The ultimate result is that readers are exposed to more literature and also more literature of questionable value. As the opening statement states, since most readers will still have faith in integrity of the authors, this may lead to spread of misinformation. Complex statistical test done in search of a positive value also in many cases leads to incorrect conclusions. Since most of the readers especially clinicians are unaware of these statistical tests, it again is a matter of faith on what authors are saying. This may also apply to reviewers and editors who may also easily fall prey to these complex statistical interpretations. So what is the options for the readers, should we stop having faith in the authors and journals. Not really, we just need to be careful and also be informed about these practices.

The readers of journals should have faith but not blind faith. We should read the articles with open mind and should make our own interpretations about the study. This may differ from what the authors have written but it would be the best interpretation for the reader depending on his circumstances and patient scenario. We should always extend our interpretations of the cases described in the articles with respect to our patient profiles. Only when the clinical scenario described in the article matches with our patients, we can extend the results and interpretations of the article. Along with other issues, generalizability is a common limitation of most orthopaedic articles. The result of many articles are simply that in given set of patients, the results was acceptable and generalizability is always left undiscussed. Many of these articles have less sample and are underpowered and thus have limited generalizability [3]. The readers should educate themselves in terms of some basic concepts of statistics to better interpret the literature. The research courses and workshops will help in getting this education and more such courses need to be organized in countries like India. Academic societies and organizations are taking these initiatives more aggressively and should benefit many clinicians

From the same aspect, even journals should make an attempt to make interpretation of studies simpler. I believe most complex statistics can be done away with and simple interpretation of data analysis can be made available to the author. Authors should be instructed to provide the dataset with raw data or basis statistics like mean and standard deviations which should be published with every article along with the statistical tests. This will allow any reader to run their own tests and find the accuracy of the tests. A separate section with editorial comments on simple interpretation of the study can be added to the article. This will help authors to interpret the studies better. The reviewers and editors should also warn the authors about over interpretation of data and should have a statistician scrutinize articles that heavily rely on complex statistics to reach an unconventional result. Most of the time, especially in countries like India, the authors work with statisticians who have very limited experience in clinical biostatistics. The authors with their limited statistical

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Author's Photo Gallery

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knowledge, provide raw data to these statisticians who simple compare and contrast every variable with each other and try to provide as many significant p values of as possible. This leads to over interpretation of data and fallacious results. Again subgroup analysis, multiple group analysis and multiple time point analysis also lead to limitations of interpretation and p value in these cases should be kept less 0.01 rather than 0.05 [this is an arbitrary suggestion and a Bonferroni correction should be done in all such scenario. Better way will be to avoid multiple comparision and focus on one primary outcome or use global assessment measures rather than individual ones [4]. There are many more such statistical subtleties and I think journals should publish review articles informing readers as well as authors regarding such concepts. Such series of articles will educate the clinicians and also create awareness in authors and readers helping them to correctly present and interpret data.

Personally I believe the authors do not consciously wish to over interpret the data, but it's done most of the time due to ignorance and also over enthusiasm especially if it is related to new concept or technique. I have full faith in all my authors and I believe the reviewers board and editorial board take all care to avoid any such issues with journal of orthopaedic case reports. I believe it is responsibility of everyone involved including, authors, reviewers and editors to minimize the risk of such malpractices and provide a clean and scientific interpretation of data to all our readers.

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