Does it still make sense to believe published scientific literature?

As many of you know, I am following with particular interest the topic of short dental implants, since clinical research in this area could provide useful indications that could change the way patients are currently treated.

All my enthusiastic collaborators and I have made a great deal of effort to design and conduct trials in order to fully understand both the limits and the potential of short implants. We have tried to design and conduct clinical research the best we can, reporting on all protocol deviations, missing or lost data, complications, etc, in an attempt to be credible and transparent. Obviously mistakes do happen, but they are not intentional and remedies can be implemented whenever mistakes are found.

However, there are a few recently published clinical trials on this topic that again cast some doubt on whether or not we should believe in clinical research.

I would like to report on one recent example. It was a split-mouth study on short versus longer implants in augmented alveolar bone. The study was published early this year in a well-respected journal. EJOI received the same manuscript in November 2016, but this was withdrawn because there were a few odd circumstances for which the authors were asked for additional explanations. In brief, in the published article it is written that the study was conducted in Italy and that the patients received short implants on one side and a bone substitute block and normal length implants on the other side. In the version received by EJOI it was written that the clinical procedures had been conducted in a dental clinic in South America, and the data were evaluated by researchers at a university in Italy.

Since I am curious and sceptical by nature, I investigated the matter further and easily discovered that the bone block substitutes used in the study were never distributed in the country in question in South America. At this point I asked to see the radiographs and the clinical pictures of all the patients treated in the study, but I was told that it was not possible because the computer storing all the data in a private practice in Italy had been stolen. I also received a copy of an official police report, which verified that a computer had been stolen. Now, anything is possible, but how can anybody critically evaluate and check the data of the study if these data no longer exist?

We have spotted a few fake manuscripts submitted to EJOI that have been published in other leading journals. In some cases we informed the editors, who always investigated the matter, but had different approaches once sufficient evidence was uncovered to make a decision: some retracted the published article, while others simply ignored the matter entirely, sticking their head in the sand as ostriches do. However, sticking your head in the sand unfortunately leaves other parts of the body potentially exposed, thus favouring the multiplication of fake studies. Nevertheless, this is not the type of clinical research that we need and you can bet that if there is sufficient evidence to indicate data manipulation or creation for an article already published in EJOI, it will be retracted.

In conclusion, what can we do to regain credibility in clinical research? Well all of us can do something at different levels: Researchers have to honestly and conscientiously report all the data, including all complications, and should avoid excluding patients with problems or unwanted outcomes. Sponsors should be open in releasing correct information without trying to omit or hide data that could potentially discredit their products. Referees and editors should try to evaluate how genuine the data are by asking for the full set of
data, radiographs and clinical pictures, if they are in any doubt. Local authorities should sanction those people when it is clearly proven that data have been fabricated. And finally, readers should keep all of their neurons switched on since they need to make their own critical appraisal.

If we decide to passively accept all the nonsense we may encounter, it might be wiser to stop reading and invest our time in doing something else.

Happy reading.

Marco