Five Is The Maximum Sample Size For Case Reports! Statistical Justification, Epidemiological Rationale And Clinical Importance.

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Introduction

Case reports are well-known designs in contemporary use and form a bulk of neurosurgical literature. However, they are sometimes inconsistently reported without a clear cut-off of the maximum sample size to demarcate them from case series and other descriptive studies. Till date, no universally accepted criteria exist for sample size justification for case reports.

Methods

We identified 13 top-ranking pure neurosurgical journals plus the Journal of medical case reports and systematically searched them for manuscripts reported as case report(s) in the title from 1-1-2008 to 31-12-2012 a period of 5 years. We then noted the sample size of each article.

Results

For the neurosurgical journals, 2.7% of the articles reported as case reports had a sample size greater than one while 16% of articles reported as case series had a sample size of less than five subjects. There is an overlap as regards the sample size for case report(s) and case series with no universally clear cut demarcation between the two. Herein we present a statistical argument on the basis of standard error and confidence interval, and an epidemiological rationale to set a cut-off of five to distinguish a case report from case series and descriptive cohorts.

Conclusions

A distinction between a case report, case series and descriptive cohort is absolutely necessary to enable the appropriate indexing and sorting of evidence. Researchers, reviewers and readers should consider this overdue land mark evidence to enable the standardization of reporting of case report(s) and case series.

Learning Objectives

Our article provides evidence to enable the standardization of reporting of case report(s) and case series. Participants should be able to distinguish between these study designs since they belong to different levels of evidence for patient care. [DEFAULT POSTER]