PST PEDIATRIC SURGERY IN TROPICS

Pediatric Surgery in Tropics
2024 (April-June); Volume 1, Issue 2: Pages 65-67
DOI: 10.5281/zenodo.10929783

Editorial

In Defense of Case Reports

Vivek Gharpure

Chief Editor, Pediatric Surgery in Tropics

Medical publishing began with case reports; or case series. Some doctor found an unusual patient or a unusual pattern of disease that was treated in a particular manner and thought it prudent to let others know about it. Some of the therapeutic principles which are now considered sacrosanct were established by such case reports. For example, the routine removal of inflammed appendix was established by the case series published by McBurney in 1891. He described the disease and its treatment in a paper which had twenty four patients.(1) There were no controls; no blinding; no multicentric collaboration and yet there was only one death. Other series describing such patients had up to 25% mortality. By current standards, McBurney's paper would have been rejected with a comment of 'unscientific claim'; and that would have been a bad thing to happen. He later described in detail the eponymic incision in a series of four patients.(2) Subsequently several anatomical studies found that only 1% patients have appendix located at McBurney's point and less than half of the patients with acute appendicitis have maximum pain at the point. However, it was a watershed event in abdominal surgery. One anecdotal case series of 24 patients and another series with just four patients changed the paradigm.

Not all innovations were taken in this spirit. In his book, Dr Robert Morris described an operation for relief of spinal cord compression, which was considered so dangerous by the then medical community and they complained to the sheriff. The officer was standing by to arrest Dr Morris had the patient had died.(3)

These days, most of the scholarly journals, association journals do not publish case reports or case series. Everyone wants a prospective study, a trial with controls. Open access journals do publish case reports, but only after taking a substantial fee.

Illnesses, congenital malformations have no predilection to be found only in university teaching hospitals. They can present anywhere in the world; are treated successfully by independent surgeons, who then do not find a platform to let the medical community know about their new finding.

If case reports were not published at all, or published in obscure, non-indexed journals, how will the rest of the world know about such conditions? As it is, most of pediatric surgical illnesses come under 'rare disease' category. Hence large sample randomized controlled trials are often improbable.

Case reports may stimulate an investigator to conceive hypotheses about the etiology and etiopathogenesis of the condition, which can later be tested in animal models or by clinical trials.

In neurology, almost every condition was first described as a case report. Are we to assume that all possible medical conditions, malformations,

anomalies, are already known? Thomas Kuhn, in his book 'The Structure of Scientific Revolutions', stated that all discoveries commence with awareness of an anomaly.[4] By denying case reports, editors are acting like ostriches, who bury their heads in sand, and refuse to look at new sights.

It is true, case reports do not establish principles of management, as they say, "One swallow does not make a summer". However, for the suffering patients, their illness and anomaly is of utmost importance, and if the treating doctor has no information about the management of the disorder, both are going to suffer. Case reports describing a previous occurrence, may give some guidelines, which the doctor may follow, sometimes modify according to the given situation. Some help is better than nothing. Case reports also provide others with ideas about their own patients, initiate studies to identify such condition in their patients, consider research to determine how it may be happening and make them think of other ways to treat it.

Unfortunately, the bogie of *impact factors* discourages journal editors from publishing case reports. What is an impact factor other than merely a derivative of some numbers? The correlation between circulation, citation and impact factors is tenuous at best, and depends upon myriad factors which are difficult to analyze.[5] Thus, those journals which already have a high impact factor will attract more manuscripts and may continue to have a high impact factor; while all other journals may languish. [6]

When all journals were printed, it cost much money to bring out an issue. Hence, editors of 'high impact journals' were not happy to publish case reports that occupied journal space without contributing to impact factor. Utilizing this scenario, predatory journals jumped in the fray and lured potential authors. Now, with electronic publication, the costs of publishing are minimal; there are no constraints of page number. Yet open access journals charge hefty amount to publish a two page case report!

In a parallel stream, that of social science, *'Matthew effect'* was a term coined by Robert Merton to describe as to how, among other things, eminent scientists will often get more credit than a comparatively unknown researcher, even if their works are similar. It also means that credit will usually be given to researchers who are already famous.[7] The same is perhaps true of 'high impact' journals.

Case reports are an important aspect of clinical research. When it comes to pediatric surgical illnesses, most of them come under rare disease category and numbers will be small even in big referral centers. It will be difficult to have a significant number of patients unless it is a multicentric, collaborative study. We have seen few such studies such as the MOMS (Management of myelomeningocele study), TOSCIN (Time of stoma closure in newborn), TOAST (Tracheo-oesophageal atresia study), CONTRACT (conservative treatment of appendicitis in children - a randomized controlled trial) and ICLMR (International Congenital Lung Malformation Registry). Such studies are costly, difficult to organize and are beyond the scope of individual surgeons practicing in remote rural areas of resource-poor settings.

Medicine is not mathematics, where theorems are proved, once and for all. Even in mathematics, *'Gödel's Incompleteness Theorem'* turns mathematics on its head, by proving that not everything in mathematics can be proved.[8]

The journal, *Pediatric Surgery in Tropics*, has taken a conscious decision to publish case reports, without charging any fee. The editorial team hopes, this will provide a platform for individual surgeons to express their new discoveries, however humble it may be.

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Address for communication: *Dr Vivek Gharpure, Email: vivekvgharpure@gmail.com*

Received 2 March 2024; Accepted 12 March 2024

Acknowledgements : None
Conflicts of Interest : None declared by authors
Source of Funding : None
Ethical concerns : None (Personal Opinion)

Citation: *Gharpure V. In defense of case reports. Pediatr Surg Trop 2024; 1(2): 65-67*