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The Undetermined Destiny of Case Reports in the Era of Sophisticated Medicine



LETTER:

We read with great interest the editorial by Dr. Benzel.¹ The importance of case reports is indeed declining in recent years. The continuous development of medicine, the use of sophisticated methodologic tools, the increasing need for cutting-edge evidence-based medicine (which cannot be achieved with case reports), and the continuous restrictions from journals on case reports all have contributed to the “diminishing value” of case reports. However, a few questions remain to be answered here. Should authors stop reporting their unique cases? Should journals stop accepting such unusual cases? Are we in an era where there is no more scientific value in case reports?

Looking back at history, we find various diseases and discoveries that were described initially as case reports. The perfect example of this is Cushing disease. In 1910, Dr. Harvey Cushing first encountered the disease in a 23-year-old woman, who is historically known as “Minnie G.” The patient had an unusual and complex clinical presentation in the form of obesity, hypertrichosis, amenorrhea, overdevelopment of secondary sexual characteristics, low-grade hydrocephalus, and increased cerebral tension.^{2,3} Such an unusual clinical combination was not yet described by any medical disorder at the time, which stimulated Cushing to begin his lifelong interest and extensive research and investigations. Cushing was confident that Minnie’s unusual presentation was due to a problem of the pituitary gland. Because of Minnie’s case and similar unusual cases reported in the literature, Cushing’s efforts eventually culminated in 1932 in his pivotal work, “The basophil adenomas of the pituitary gland and their clinical manifestations (pituitary basophilism).”⁴ In his article, Cushing described 2 cases from his own experience (Minnie G. was the first case) along with 10 other cases reported in the literature.⁴ Because of such single case reports, the clinical symptoms of the disease were described and were named after Cushing.⁴ Not only did Minnie G. aid in discovering a new syndrome, but her very unusual long-term survival intrigued Carney⁵ to speculate that she might have had the Carney complex of primary pigmented nodular adrenocortical disease.

The value of case reports in our opinion goes beyond just mere reporting of unique cases. It expands our understanding of the nature of a disease and helps us, although by a small step, advance our field. This is clearly evident in the case of some recent diseases, such as the Middle East respiratory syndrome coronavirus.⁶ The disease was initially described as a single case, and extensive reporting of more cases expanded our understanding of the nature of such an infection, its origin, route of transmission, pathophysiologic mechanisms, and clinical implications.⁷

The value of case reports is also evident by their role in delineating hidden unusual disease associations,^{8,9} novel genetic discoveries,¹⁰ new surgical techniques and technical nuances,¹¹ unique thought-provoking disease pathogenesis,¹²

decision-making challenges and conundrums,¹³ cutting-edge management innovations,¹⁴ and unusual complications.¹⁵ Such unique cases carry new information that can be of huge educational value and are of great interest to the readers.

Therefore, the answers to the aforementioned questions are not easy. The continuous advancements in the medical field should not diminish the value of case reports. On the contrary, these advancements should aid case reports to be the initial building blocks and cornerstone that employ technical and methodological advances for better understanding of such rare cases and form an infrastructure for future cutting-edge evidence-based medicine. We hope that **WORLD NEUROSURGERY** continues to provide the platform that can accommodate such rare and innovative case reports and remains the strong infrastructure that authors can rely on to report such cases.

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