EDITORIAL

Case Reports in the Era of Clinical Trials

临床试验年代中的病例报告

Los informes de casos clínicos en la era de los ensayos clínicos

David Riley, MD, *United States*

Author Affiliation
David Riley, MD, is the editor in chief of *Global Advances in Health and Medicine*.

Correspondence
David Riley, MD
driley@gahmllc.com

Citation
Global Adv Health Med. 2013;2(2):10-11. DOI: 10.7453/gahmj.2013-012

Key Words
Case reports, CARE guidelines, clinical trials, evidence

Once upon a time, case reports were the primary content of scholarly medical journals. Case reports are still common but have come to be viewed more often than not as anecdotes rather than evidence. And even though David Sackett referred to the important link between clinical expertise and external evidence,[1] the "gold standard" today is the randomized controlled clinical trial. Why is this?

Some of the reasons may be linked to the confluence of historical developments in medical research with the disastrous adverse effects of thalidomide.[2] In 1961, *The Lancet* published correspondence with an Australian obstetrician, Dr McBride, who noted that almost 20% of women who had taken thalidomide to treat morning sickness during pregnancy gave birth to children without limbs.[3] In the United States, this led to the 1962 Kefauver Harris Amendment that, over objections by the pharmaceutical industry, required evidence of safety and effectiveness of medications before a new drug was approved. Government oversight and investment in biomedical research combined with private investment from the pharmaceutical industry stimulated the evolution of clinical trial methods. Other factors that contributed to the increasing reliance on the randomized clinical trial included an underappreciation of the importance of individualization of treatment and our assumptions about causality and what constitutes "clinical evidence."[3] Building on Beecher's emphasis on the importance of double-blind, placebo-controlled clinical trials outlined in his 1955 article "The Powerful Placebo,"[4] trial methods evolved under the guidance of the National Institutes of Health in the 1960s.[5] From the 1970s through the 1990s, research methodology expanded to included an array of techniques used today, from "power calculations" to the "Holms-Bonferroni" method to "interim data analysis." Clinical research has evolved from a public health service to a business driven by pharmaceutical sales, patent protection, and regulatory requirements. The pharmaceutical and medical device industries, in partnership with contract research organizations (CROs) and academia, control many aspects of modern clinical research, from trial design to implementation (or termination) to publication.[6]

Case reports have languished, and in many cases, they are insufficiently rigorous to inform the design of clinical trials or individualize the recommendations that emerge from clinical research.[7,8] Integrating systematically collected data from the "real world" practice of healthcare with other clinical research methods will help deliver a higher-quality body of evidence from which to make decisions.

The editors of *Global Advances in Health and Medicine* believe that high-quality case reports are an important tool to understand global convergences in health and medicine and systems oriented approaches in healthcare. In October 2012, Global Advances in Health and Medicine, LLC, (GAHM) and the University of Michigan hosted a 2-day consensus meeting with international experts to develop health research reporting guidelines for case reports. From this meeting emerged the "CARE guidelines," a 14-item checklist that facilitates systematically reporting information from case reports to provide signals of cost, effectiveness, and harms. These CARE guidelines and a short article explaining the development process will be published soon in medical journals and will be available on the Equator Network (www.equator-network.org). GAHM also is supporting the development of guidelines extensions for specialists, tools for writing case reports, and a data registry to manage data from the point of care for healthcare stakeholders—from patients to practitioners to researchers to service providers to policymakers.

The persistence and growth of case reports in the era of clinical trials suggest that case reports have value. The editors of *Global Advances in Health and Medicine* believe that part of their value lies in individualizing clinical practice recommendations—an increasingly appreciated proposition today as healthcare delivery transitions to systems-oriented approaches around the world. Sophisticated data analysis using natural language processing and big data enables evaluation of data from the point of care and case reports in a way that was not possible 30 years ago—uncovering evidence hidden in what used to be regarded as anecdotes. Anticipating a future role for case reports in clinical research and in guiding clinical practice,[9] the CARE guidelines provide a framework for systematic reporting standards so that case reports related to the care of individual patients have meaning not only to that patient and his or her healthcare provider but to the broader medical community as well.

REFERENCES

1. Sackett D. Evidence based medicine: what it is and what it isn't. BMJ. 1996;312(7023):71-2.
2. McBride W. Thalidomide and congenital abnormalities. Lancet. 1962;279(7224):303-5.
3. Kiene H, Hamre H, Kienle G. In support of clinical case reports: a system of causality assessment. Global Adv Health Med. 2013;2(2). In press. DOI: 10.7453/gahmj.2012.061.
4. Organization, review, and administration of cooperative studies (Greenberg Report): a report from the Heart Special Project Committee to the National Advisory Heart Council, May 1967. Control Clin Trials. 1988;9(2):137-48.
5. Beecher HK. The powerful placebo. JAMA. 1955;159(17):1602-6.
6. deMets DL, Califf RM. A historical perspective on clinical trials innovation and leadership: where have the academics gone? JAMA. 2011;16;305(7):713-4.
7. Kaszkin-Bettag M, Hildebrandt W. Case reports on cancer therapies: improving reporting quality. Global Adv Health Med. 2012;1(2):8-10.
8. Richason TP, Paulson SM, Lowenstein SR, Heard KJ. Case reports describing treatments in the emergency medicine literature: missing and misleading information. BMC Emerg Med. 2009 Jun 15;9:10.
9. Jenicek M. Clinical case reporting in evidence-based medicine. New York: Oxford University Press; 2001.