Editorial

A Reflection of Our Role as Radiologists in India's Current Landscape of Infectious Diseases

Anuradha Chandramohan[1]

[1] Department of Radiology, Christian Medical College Vellore, Vellore, Tamil Nadu, India

Indian J Radiol Imaging 2024;34:577–578.

As radiologists, our role in the health care system is crucial. With the rapid economic growth in India, the prevalence of noncommunicable diseases has increased. We have witnessed a shift in the focus of radiologists and radiology subspecialists toward diagnosing noncommunicable diseases such as cancer, cardiovascular conditions, and chronic ailments. However, the prevalence of infectious diseases has been consistent over the last few decades, contributing to 33.9% of the total ailing population of India.[1] Thus, our contribution to diagnosing and managing these diseases is invaluable.

Significant socioeconomic and demographic vulnerabilities have been identified for infectious diseases. The highest prevalence of infectious diseases is seen among rural residents, females, children, and the elderly. While many infections have been effectively controlled or eradicated, many are still highly prevalent. Tuberculosis is one such example, with India accounting for more than a quarter of the global burden of the disease.[2]

Diagnosing infectious diseases is not without challenge. Infections often evade timely diagnosis due to their diverse manifestations, multisystem involvement, and because they closely mimic other inflammatory diseases and neoplasms. This is especially true for tuberculosis.[3] It is a testament to the complexity of our work and the need for continuous learning and adaptation. Clinical presentation and patient demographic characteristics are important considerations for diagnosis. Understanding the local prevalence and potential pockets of high prevalence aids diagnosis. Examples of these are many and include a host of bacterial, viral, mycotic, and parasitic infections among at-risk populations. I also want to highlight rare mycotic infections, such as basidiobolomycosis and actinomycosis, among farmers who often walk barefoot. These infections present as mass-like thickening of the gastrointestinal tracts with contiguous involvement of intra- and retroperitoneal structures.[4]

Large population size, ample opportunities for economic growth, rapid urbanization, and rapid expansion of agriculture and horticulture into forest areas have brought human beings in contact with sylvatic animals more than ever. Thus, we will likely see more zoonotic infections with wild animals as intermediate hosts. A classic example of one such infection is alveolar echinococcosis, with wild foxes and rodents acting intermediate hosts. The true seroprevalence of alveolar echinococcosis in India is unknown. Alveolar echinococcosis is a classic infection that mimics neoplasm due to infiltrating liver, lung, and brain masses at presentation.[5] It evades timely diagnosis due to the lack of facilities for confirmatory serology and is often fatal.

Now more than ever, we must swiftly adapt to rapidly evolving classification systems that significantly impact the management of common diseases. One such area that demands our immediate attention is uniformity in radiology reporting practices, particularly in infections like hydatid disease. Our role extends beyond diagnosing hydatid disease. The lack of standardized reporting in this area poses challenges for clinical referrers in delivering optimal care. Therefore, widespread adoption of the World Health Organization Informal Working Groups on Echinococcosis (WHO-IWGE) classification of hydatid cysts and its incorporation into our radiology reports will significantly enhance the management of hydatid infection.

As a radiology community, we must standardize imaging practices and report delivery for common everyday conditions and infections. This, in turn, must be translated into teaching and curriculum development for widespread adoption. Indian College of Radiology and Imaging Clinical Orientation to Radiology Essentials (ICRI-CORE) sessions of the ICRI in all the academic activities of the Indian Radiological and Imaging Association (IRIA) across the country are central to this effort. To be at the forefront of imaging and diagnostics of infectious diseases, we must focus on research and development in this area, which is both an opportunity and a responsibility.

Funding
None.

Address for correspondence
Anuradha Chandramohan, MD, FRCR, Christian Medical College Vellore, Vellore 632004, Tamil Nadu, India
(e-mail: anuradha.chandramohan@cmcvellore.ac.in).

DOI https://doi.org/10.1055/s-0044-1788890.
ISSN 0971-3026.

Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

Conflict of Interest
None declared.

References

1 Ram B, Thakur R. Epidemiology and economic burden of continuing challenge of infectious diseases in India: analysis of socio-demographic differentials. Front Public Health 2022;10:901276

2 World Health Organization. World health statistics 2023: monitoring health for the SDGs, sustainable development goals [Internet]. 2024. Accessed July 23, 2024 at: https://www.who.int/publications/i/item/9789240074323

3 Sharma R, Madhusudhan KS, Ahuja V. Intestinal tuberculosis versus Crohn's disease: clinical and radiological recommendations. Indian J Radiol Imaging 2016;26(02):161–172

4 Vs V, Hallur V, Samal S, et al. Basidiobolomycosis of right colon mimicking as carcinoma of colon. ACG Case Rep J 2021;8(05):e00573

5 Madhusudhan KS, Srivastava DN, Dash NR, et al. Alveolar echinococcosis of the liver: a diagnostic problem in a nonendemic area. Curr Probl Diagn Radiol 2016;45(01):80–83

