

# Speaking for Ourselves

## Geographic eponyms: A history of geography in medicine

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### ABSTRACT

Geographic eponyms have commonly been used in medical terminology, with diseases and medical entities being named after the place where the condition was discovered (e.g. Bombay Blood group) or invented (Jaipur Foot) or where the disease was first detected (Rocky Mountain Spotted fever) or where a consensus meeting has been held (Banff) or for other reasons (Argentina flag, Congo red stain). In 2015, the WHO decided to adopt a politically correct method to name infectious diseases in the future. We illustrate, in verse form, some of the places that have been used in medical terminology, over the centuries. An accompanying essay explains the specific reasons for the selection of these locales in our vocabulary.

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A thousand years ago in Egypt of old,  
Rosacea by any name was still treatable by gold.  
Ailments were named after a river or a place,  
A land of ill health was not considered a disgrace.  
Examples are aplenty and through history they abound,  
Diseases whose names originated in home ground.

Sicknesses, weaknesses, lethargy galore,  
Nomenclature for illnesses soon came striding to the fore!  
Let's hark back to days when island tempers ran strong  
And tired muscles ached in the epidemic of Bornholm.  
Prairie winds shivered numb in the bite of La Crosse  
And 'roos struck hard on Australia's River Ross.

Bleeding fevers washed red along the Ebola and the Danube  
Healing salts of Epsom were oft elixirs in a tube.  
Forest ticks waged war through Kyasanur's monkeys  
And Borrelia ruled supreme in Lyme's encephalomyelitis.  
But times have changed, it is now said  
And naming diseases after places fills researchers with dread.

The christening of Norwalk virus and New Delhi M-1 had  
countries crying foul

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That people would be ostracized, malicious propaganda would  
prowl.

A plaintive voice has risen 'This cannot be allowed!'  
'We'll stop the defamation', most governments avowed.  
The questions were numerous, the answers unclear  
Addressing the issue would take year after year.

WHO's guidelines 'The naming of new human infectious diseases'  
Tried to ensure the stigma inflicted, completely ceases.  
It was a first step and its implications slowly grew  
As people looked forward and pondered anew.  
Should MERS coronavirus soon be renamed?  
Would *Lake Victoria marburgvirus* also be defamed?

Could Nowell's serendip find another Philadelphia chromosome?  
Would diseased cities continuously prey on Stockholm syndrome?  
Even while these declarations sought protection by a ban  
Not all terms were found derogatory to land or to man.  
Shining light on the topic is the ophthalmic Argentina Flag  
An intumescent cataract's capsulorrhexis snag.

Banff in Alberta with its mountains and hot springs  
A Classification of Rejection for renal allografts brings.  
The rarely found Bombay Blood Group is a recessive gene facet  
It was discovered by Bhende *et al.* and published in *The Lancet*.  
'Congo' Red was a term used as a gimmick in marketing strategy  
To increase the dye sales of an enterprising German company!

It colours amyloid fibrils with a birefringent histology  
And characteristically exhibits an apple green morphology.  
With Factor V Leiden mobile clots in deep veins lie;  
India Ink stain is a Chinese origin cryptococcus dye.  
Vibrant Milan selects patients for liver transplant lists;  
Rotterdam provides criteria for diagnosing ovarian cysts.

Fingerprinting gets enhancement through the dyes of Sudan  
It is also used to pick myeloid leukaemias known to man.  
Through Rift Valleys and Rocky Mountains we've cleansed  
heated disaster  
All manners of fractured sentiment set in place by Parisian Plaster.  
Heaving strides on Jaipur's foot help prostheses take us far  
Bloodletting now stays sealed in the Staffordshire leech jar.

Some meandering years later, we move forward in the hope  
Past experiences have all taught us, against adversities how to  
cope.

As the future sweeps upon us, will new diseases still unfold?  
While their names are being decided, what new sagas will be told?

Let's make a pact on hallowed ground when tempers fray on short  
 lease  
 And solemnly swear to malign neither land nor disease!

\* \* \*

This poem was written as an ode to geographical landmarks that have lent their names to medical terminology. While this has been done historically, of late, it has been considered politically incorrect to do so. We, of course, wish no inadvertent offense towards any person or place. WHO published best practice guidelines for the naming of new human infectious diseases, in May 2015, in which it specifically stated that disease names should not include geographical locations in the form of cities, countries, regions or continents. Some of the names it recommended be avoided include Middle East Respiratory Syndrome, Spanish Flu and Japanese encephalitis.<sup>1</sup>

Readers may need some explanations for some of these entities, given that they are from diverse fields in medicine.

Bornholm disease, named after the Danish island where early cases were first identified, is also known as epidemic myalgia.<sup>2</sup> Mosquitoes were the primary vectors of La Crosse encephalitis which struck Wisconsin in the Appalachian frontier and related Midwestern areas of the USA with seizures and paralysis in severe cases.<sup>3</sup> Kangaroos and wallabies are the main reservoir hosts for River Ross virus, which is endemic in Australia.<sup>4</sup> Ebola virus which causes haemorrhagic fever is named after the Ebola River, which witnessed the outbreak of the disease in 1976.<sup>5</sup> Similarly, the river Danube lends its name to a relapsing fever that often afflicted sailors.<sup>6</sup>

Epsom, in Surrey, England, produces magnesium sulphate which is on the WHO Model List of Essential Medicines, a compilation of the most important medications needed in a basic health system.<sup>7</sup> Kyasanur in India is home to a forest disease also known as Monkey fever and is transmitted to humans through the bite of nymphs of forest ticks.<sup>8</sup> Lyme disease, also known as Lyme borreliosis, is an infectious disease caused by *Borrelia* bacteria and can cause chronic encephalomyelitis in the late disseminated infection stage.<sup>9</sup>

Norwalk virus was initially known as Norovirus, but was renamed in 2011 when the International Committee on Taxonomy of Viruses (ICTV) received a request to rename the genus. There was a worry that Japanese children who had 'Noro' as their family name would be subjected to teasing/bullying by others. The ICTV published a formal statement encouraging the media, national health authorities and the scientific community to use the virus name 'Norwalk virus', rather than the term 'norovirus', when referring to outbreaks of the disease.<sup>10</sup>

The health ministry in India has disputed an article that appeared in *The Lancet* in August 2010, which stated that the New Delhi metallo-beta-lactamase 1 gene originated in India. It described this conclusion as 'unfair' and reiterated the safety of Indian hospitals as treatment centres. Indian politicians allege that linking the New Delhi M-1 gene to India was 'malicious propaganda' and argued that the journal article represented an attempt to scare medical tourists away from India.<sup>11-13</sup>

Marburgvirus, which was discovered in a small outbreak in Marburg, Germany in 1967, was renamed after its parent species *Lake Victoria marburgvirus* in 2005. However, in 2010, the name Marburgvirus was reintroduced and the name of the species was changed.<sup>5</sup>

Peter Nowell, along with David Hunderford, discovered the

Philadelphia (Ph) chromosome in 1960. While attending a commemoration of the 50th anniversary of the discovery of the Ph chromosome in 2010, Nowell used a reference from the fairytale 'The Three Princes of Serendip' to describe how he accidentally discovered metaphase spreads, which would lead to eventual recognition of the chromosome.<sup>14</sup>

Argentina Flag, Banff classification of renal allograft rejection, Bombay blood group, Congo Red, Milan criteria in liver transplantation and Rotterdam criteria of ovarian cysts have been described in the poem. Factor V Leiden is an inherited disorder of excessive clotting in veins which can lead to deep vein thrombosis and pulmonary embolism.<sup>15</sup> It is named after the Dutch city of Leiden in South Holland.<sup>16</sup>

India Ink was discovered in neolithic China in the third millennium BC.<sup>17</sup> It is used in screening programmes to confirm the presence of *Cryptococcus* by absence of staining of the polysaccharide capsule of the yeast, thereby creating a 'halo'.<sup>18</sup> Sudan black dyes are used in forensic medicine for fingerprint analysis and in haematological disorders to differentiate myeloblasts from lymphoblasts.<sup>19,20</sup>

Rift Valley fever, named after the intracontinental ridge in Kenya, Africa, where the disease was first identified among livestock, can be prevented from being transmitted to humans by vaccinating animals against the disease.<sup>21,22</sup> A vaccine for animals is currently available for conditional use in the USA.<sup>23</sup> The introduction of effective antibiotics has reduced the mortality rate associated with Rocky Mountain spotted fever, also known as tick typhus and 'blue' disease.<sup>24</sup>

Plaster of Paris, named after the French capital where it was extensively used in constructions in the 1700s, is used to stabilize broken bones by acting as a support. It is also known as the orthopaedic cast.<sup>25,26</sup> Jaipur foot is a rubber-based prosthesis designed in 1968 by Ram Chander Sharma and Dr P.K. Sethi, for patients with below knee amputations. It was rated as 'one of the most technologically-advanced social enterprises in the world', in an article in *Forbes* magazine in 2011.<sup>27</sup>

Leeches were an important tool in the bloodletting armamentarium, which represented a major form of medical treatment until the 19th century.<sup>28</sup> The leeches to be sold were often housed in a jar with holes in the lid made for aeration, a popular example being the Staffordshire Leech Jar. Currently these segmented annelids are mainly used to deal with difficult-to-treat venous congestion in reconstructive surgeries.<sup>29</sup>

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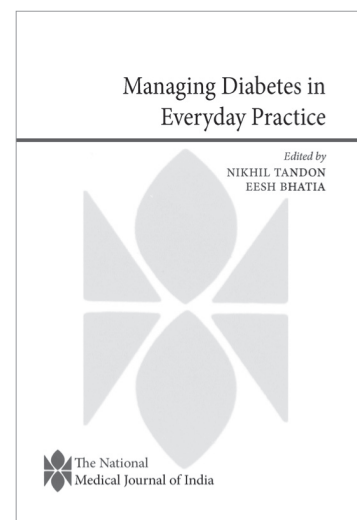
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