

Wikipedia

A Good Address for Neuroradiologists?

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Published online: 19 August 2011
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In the academic community Wikipedia plays a strange role. It is comparable to popular newspapers: nobody will admit reading *Bild* in Germany or *The Sun* in Great Britain, so where do the print runs of millions of daily copies come from?

Wikipedia is often considered unreliable as there is no guarantee that the information is provided by true experts in the field and the information may be factually wrong which can go unnoticed for a long time. However, I often observe that our residents check on a rare disease with a Google search, which is rather common behavior among our colleagues [1]. There is a one-third chance that a Wikipedia article will come up as the first result of such a query that rises to 68% for a placement among the first 5 search results [2] and in most cases, this will be considered sufficient.

Among non-professionals, the younger/better educated/higher income group tends to look for information on medical issues on the web [3] and this means that a certain percentage of your and my patients will probably refer to Wikipedia as a first source of information when they get a diagnosis or when they have an appointment for a procedure that they want to learn more about.

How reliable is Wikipedia for this clientele? Studies in other fields have shown that it is usable as “a cursory overview” [4] but is this sufficient? This article is not an in-depth survey (this would be a task for a major paper); I compare the German and English versions of Wikipedia for a theoretical patient and look at the amount and correctness of information that this patient will find.

Test Setting

A patient had a magnetic resonance imaging (MRI) examination for chronic headache. An incidental 7 mm-aneurysm of the anterior communicating branch was found. The patient is now scheduled for a computed tomography (CT) angiography study and a catheter angiography, coiling as a treatment option was mentioned. He goes home, fires up his personal computer (PC) and starts to look in Wikipedia about the diagnosis and the planned procedures. What will he find?

German Wikipedia (<http://de.wikipedia.org/wiki/>)

The hypothetical patient starts with a search for “Aneurysma.” The Wikipedia article is headed by a notice that the following text lacks references and may be removed. Intracranial aneurysms make up only a short section of this article. The mortality of 60–70% in subarachnoid hemorrhage that is mentioned in the article is definitely too high. Literature references are scarce; the one source that is mentioned, however, is of good quality: the article refers to the German Society of Neurology guidelines for unruptured intracranial aneurysms.

We follow the link to the term “Coils” on this page and find an article entitled “Guglielmi Detachable Coils.” The most recent literature cited is from 2006 and none of the referenced papers is freely accessible to the general public. It is mentioned that wide-necked aneurysms require remodelling techniques for a coil treatment; the link to “Remodelling-Techniken,” however, leads to a page that says “Here, you can write a new Wikipedia article.”

Next, we follow our hypothetical patient on his search for the various examination techniques that he has to expect. There is even a separate article “CT-Angiographie” (CTA)

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Aneurysm

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For other uses, see *Aneurysm (disambiguation)*.



Fig. 1: Warning notice ahead of the entry (Copyright: Wikipedia.org)

Aneurysm Types

[edit]

Aneurysm is a circumscribed dilation of an artery connecting directly with the lumen of an artery or a cardiac chamber connecting directly with the lumen of an artery, usually due to an acquired or congenital weakness of the wall of the artery or chamber.

Aneurysm types include ampullary aneurysm, aneurysm by anastomosis, aortic aneurysm, aortic sinus aneurysm, arteriosclerotic aneurysm, arteriovenous aneurysm, atherosclerotic aneurysm, axial aneurysm, benign bone aneurysm, Bérard's aneurysm, berry aneurysm, cardiac aneurysm, Charcot-Bouchard aneurysm, cirroid aneurysm, compound aneurysm, congenital cerebral aneurysm, consecutive aneurysm, coronary artery aneurysm, cylindroid aneurysm, diffuse aneurysm, dissecting aneurysm, ductal aneurysm, ectatic aneurysm, embolomycotic aneurysm, false aneurysm, fusiform aneurysm, hernial aneurysm, infraclinoid aneurysm, intracavernous aneurysm, intracranial aneurysm, miliary aneurysm, mural aneurysm, mycotic aneurysm, Park's aneurysm, peripheral aneurysm, phantom aneurysm, Pott's aneurysm, pulmonary artery aneurysm, racemose aneurysm, Rasmussen's aneurysm, aneurysm of the right ventricle or right ventricular outflow patch, ruptured aneurysm, saccular aneurysm, serpentine aneurysm, aneurysm of sinus of Valsalva, supraclinoid aneurysm, syphilitic aneurysm, traumatic aneurysm, true aneurysm, tubular aneurysm, varicose aneurysm, ventricular aneurysm, aneurysm of the ventricular portion of the membranous septum, verminous aneurysm, and worm aneurysm.

Fig. 2: List of aneurysm types (Copyright: Wikipedia.org)

that was last edited in early 2011 but the literature cited is from 2003, and I would neither support the view that “the application in heart and brain is not yet established” nor would I compare CTA resolution to “X-ray films.”

English Wikipedia (<http://en.wikipedia.org/wiki/>)

Again, we start our search with the term “Aneurysm.” As in the German edition, the article contains a warning notice that it requires cleaning up and additional references (Fig 1):

The page lists facts but it lacks explanations. What will a “normal” web user make of this (Fig. 2):

A total of 55 types of aneurysm are given, none of them with a link for further information. Does that really help to make anything clear?

Again, there is no publicly accessible professional literature listed although some references are made to general “health websites”. A link to “Guido Guglielmi” leads to “Guglielmi Detachable Coils”(GDC)—again, no literature there but at least a link to the neurosurgery department at University of California Los Angeles (UCLA).

Next, the so far slightly disappointed patient will probably look for “Computed Tomography Angiography”. The explanation is much shorter than in the German version and sparsely illustrated with only one picture of an abdominal aorta. We do, however, find an extensive table with links to all kinds of medical imaging procedures.

What about “Coiling”? The search within Wikipedia finds the above mentioned page about GDC and, much to

my astonishment, a separate page about the International Subarachnoid Aneurysm Trial (ISAT) study.

In summary, Wikipedia leaves much room for improvement when it comes to diagnoses and procedures commonly encountered in neuroradiology. The articles are partly outdated, not comprehensive and they lack publicly accessible, up-to-date references. This has also been noted in a study that focused on a specific disease and found that “more definitive sources” should be included and that “frequent checks” of external links should be performed [5].

We cannot keep our patients from using Wikipedia as an information tool but we should advise them about the inherent limitations of this encyclopaedia with its “massive, unearned influence on what passes for reliable information” as one Wikipedia critic put it [6].

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