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Editorial

Internet and surgery

Internet y cirugía

Since the beginning of the last century, we have borne witness to one of the most important revolutions in the contemporary world, that of the information society. The technological giant internet has played a particularly important role, and has been introduced into our lives to the point whereby something that was initially a novelty has now become part of everyday life and an essential tool for obtaining up-to-date information.

Internet is a true milestone in modern history which has converted the utopia of modern communication into a reality, a fact which has also affected the world of medicine. In addition, this globalising effect has played a particularly important role in our area of speciality as the bases that sustain the transfer of knowledge in contemporary surgery—ie, text, images, video, and tools for managing this information—have converted it into an ideal science to be spread via telecommunication networks.[1]

As a result of all this, we have borne witness to the development of numerous information and internet-based training tools, which have achieved varying results and levels of implementation.[2] At this stage, it is important to take into account the disappointment caused by the collapse of many companies that were born of the internet and that culminated in the bursting of the "bubble.com." In addition to having well-known financial consequences, this fact has caused astonished reactions following the initial euphoria, but it has also allowed us to consolidate our knowledge and face the future sustained on the technological legacy of the innumerable *cybercorpses* that were buried at the end of the 20th century.

We currently speak of cybersurgery when referring to science that applies internet technology in the field of surgery and studies the impact, the challenges and the opportunities that this technology offers for the development and implementation of surgical patient care. Cybersurgery can not only be used for professional training, but also for other aspects, such as users' health education and help with the doctor-patient relationship.

At this stage, we have observed the consolidation of the scarcely existing themed portals dedicated to surgery, generally endorsed by scientific societies, as well as the abandonment or disappearance of a large majority of them. However, there is no doubt that the aspect that has changed the most is the increase in online access to specialised journals and even the appearance of some new ones, in a solely digital format. This carries certain advantages for a professional that demands information. Moreover, it has revolutionised the management of journals allowing rapid publication of contents and an increase in the rate in which they are updated.

All these changes have led to the establishment and rapid expansion of evidence based medicine (EBM), one of the pillars of modern medical thinking which has been recognised by the world of surgery. The EBM method is based upon systematic revision of scientific literature and internet is one of the keys for its development.

Over recent years, the network of new technologies has grown exponentially in number and complexity, and the World Wide Web and its applications are the services that have undergone the most changes. Consequently, it is important to be aware of some of the aspects upon which current development of the relationship between internet and surgery is based, in a place where technology and society interacts. In this context, a new *web* concept has emerged, called Web 2.0, characterised by being a web for people and not for data, which provides an environment for developing Medicine and Surgery 2.0.

This Web 2.0, also called next generation web (NGW), born as a socio-technical reality and based on a collection of technologies called a universal digital network, provides services with a particularly agile and flexible interface where doctors and patients can interact freely. Another particularly relevant aspect of NGW development is the development of content management systems, which comprise the essential foundations of the service platforms used for publishing *blogs* and *wikis*, as well as content syndication tools, amongst which Really Simple Syndication (RSS) is worthy of mention.

However, despite great social and technological advancements of NGWs in numerous fields, Medicine 2.0 and Surgery 2.0 are still relatively new concepts. It is still too early to assess the effects of interaction between doctors and patients in the virtual world of *Second Life*, the real use

of *Used-Based Sites* for patients, the effects of *Surgical Blogs*, or the implementation of *Surgical Wikis*. Aspects such as its true informative and academic use, as well as its ethical and legal medical framework, are yet to be defined.

Finally, it is important to stress that, even today, the quality of documents and resources on offer in the field of cybersurgery is poor, with the exception of scientific journals and the consolidated portals.[3,4]

The information provided over the internet is very different to the printed one, as it is poorly controlled and lacks context. For this reason, information may not be false or incorrect, but may arrive out of context to the users and thus may be wrongly interpreted. Therefore, the development of tools that guarantee the distribution of quality health information and in specific markets is required. In this respect, the webpage accreditation seals have proven themselves to be of no real use and peer reviews are two slow in comparison to the speed demanded by internet. Therefore, the World Wide Web Consortium has tried to develop the so-called Platforms for Internet Contents Selection (PICS), which are tools that allow the author, the editor and the user to add labels that qualify the published material. Finally, over recent years cybermetrics has begun to be developed. This tool uses automatic methods for registering the number of links to a *web* page, the number of visitors that the web page receives, and user behaviour (number of visits, time spent on each page, etc) to create a *Website Index* similar to the *Science Citation Index*.

Internet has been a starting point for dispelling myths and increasing access to surgical knowledge; however it is still necessary to find suitable ways of validating the information, for professionals as well as for patients, with the aim of guaranteeing access to quality information, as our specialist area requires.

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