YouTube™ as a source of patient information for lumbar discectomy

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ABSTRACT

INTRODUCTION YouTube™ contains more than 60% of all videos on the internet. Its popularity has increased, and it has now become a source of patient education and information. It is unregulated for the quality of its videos. This project was designed to assess the quality of videos on YouTube™ on lumbar discectomy.

METHODS A systematic search of YouTube™ was performed. The search terms used were ‘lumbar’ and ‘discectomy’. The first ten pages were reviewed. Information was recorded relating to the date of publishing, the publisher and the number of viewings. The content was reviewed using criteria based on recommendations from the British Association of Spine Surgeons website. Content was assessed and points were awarded for information relating to management options, description of the procedure (including anaesthetic, likely recovery and outcome) and complications as well as information relating to the author and his or her institute. An overall rating of ‘inadequate’, ‘poor’, ‘average’ or ‘good’ was given.

RESULTS Overall, 81 videos were identified. The total number of viewings was 2,722,964 (range: 139–111,891), with an average number of 34,037 viewings per video. There were 16 with a rating of ‘good’, 25 with a rating of ‘average’ and 40 with a rating of ‘poor’ or ‘inadequate’. The most common missing information related to anaesthesia or complications. Most videos (69/81) were broadcast by surgeons or surgical institutes.

CONCLUSIONS The quality of YouTube™ videos is variable and we believe this represents the unregulated nature of broadcasts on YouTube™. Thought should be given to information in videos prior to placement.

KEYWORDS

Lumbar – Discectomy – YouTube™ – Patient education

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The internet is a vast and rapidly expanding resource for patients to access information relating to their condition. A previous study has shown a high use of the internet to access information in the elective spinal setting. Patients experiencing lower back pain have also been shown to have a higher internet use than those with other conditions that may be encountered in the adult orthopaedic setting. From other studies, it is clear the internet has been seen as a useful and easily accessible source of information, and around 80% of patients will admit to using the internet for medical information purposes. There is evidence that the outcome of spinal intervention is affected by patients’ beliefs and attitudes towards their treatment and conditions.

YouTube™ (http://www.youtube.com/) is the largest online library of videos and is unregulated. Around 100 hours of content is uploaded to YouTube™ every minute with over 1 billion unique viewers every month. It has gained popularity with healthcare providers as a way of reaching their clients. With over 60% of all online videos reportedly on YouTube™, it has developed into a library of information for patients.

Several studies have looked at the quality of information in the videos that have been broadcast around numerous different medical subjects ranging from anorexia to prostate cancer. To our knowledge, none have looked at the quality of YouTube™ videos for lumbar discectomy. The aim of this study was to assess the quality of videos available for viewing on the subject of lumbar discectomy.

Methods

In September 2012 a systematic search of YouTube™ was performed by the lead author. The search terms were ‘lumbar’ and ‘discectomy’. The search was limited to the English language and to videos of less than ten minutes’ duration. The exclusion criteria were: videos longer than ten minutes, patient testimony, non-surgical management and incorrect spinal level. Based on a previous method, only the first ten pages were reviewed. This reduced the number of ‘hits’ to 200 videos. Videos with multiple parts were then grouped as one video. This resulted in 81 videos for review (Fig 1).
The videos were reviewed independently by two authors (FB and HL) on pre-agreed criteria. These criteria were based on information given on the British Association of Spine Surgeons website and on the Health on the Net Foundation website (Table 1). An overall grade of ‘poor’, ‘average’, ‘good’ or ‘excellent’ was given to each video. A random selection of videos were reviewed by the senior authors (AJ and MJHM) and these were compared with the grading by the reviewers. All statistical analysis was performed using SPSS® version 19 (SPSS, Chicago, IL, US).

**Results**

Of the 81 videos, the total number of viewings was 2,722,964 (range: 139–111,891), with an average of 34,037 viewings per video. There were 16 with an overall rating of ‘good’, 25 with a rating of ‘average’ and 40 with a rating of ‘poor’ or ‘inadequate’. Videos were commonly found to be missing information on surgical complications as well as information about non-surgical and conservative management. Most videos were posted by individual surgeons or healthcare providers (n=89). Five were posted by surgical companies, four by news stations and three by medicolegal services.

The kappa coefficient for the two reviewers was 0.625 and the interclass correlation was 0.914. Absolute agreement with the scores of the two reviewers was seen in 59 of the 81 videos. The evaluation of the two reviewers corresponded well with that of the random selection sent to the two senior authors. The most common information that was missing in the video was management options available to the patient and complications following surgery. The most common country of origin of the videos was the US. Medical qualifications were stated by the author of the video in 43 cases (53%); 28 (36%) were orthopaedic spinal surgeons and 15 (19%) were neurosurgeons. Website addresses for more information were given in 45 videos (56%).

**Discussion**

The YouTube™ videos were assessed for information pertinent to lumbar discectomy. The quality of these videos was variable and they often lacked information we would deem necessary for an informed consent process. Most of the videos included in this study were promotional videos from clinics in North America advertising the services they can offer patients.

Videos were particularly poor at supplying information on the length of recovery and complications from the procedure. Information about the pathophysiology of lumbar disc herniation was missing in over half of the videos. There was also a lack of information relating to the course of most disc herniation and the possibility of conservative management. This may reflect the market for which some of these videos were intended and that the people/organisations posting these videos want to offer the patients a quick resolution of their symptoms.

As our results were limited to the first ten pages, it is possible that videos were missed that are better in terms of their content and more robust than some of those included in the study. Nevertheless, we feel that the limit of ten pages is justified as it is rare for people using the internet to go beyond the first ten pages in search results. Consequentially, this represents what is likely to be seen by patients when they search YouTube™ for this information.

Our results for the quality of YouTube™ videos are very similar to previously reported assessments of the internet as a source of information for patients. To our knowledge, this is the first assessment of videos on YouTube™ for a spinal surgical procedure. Our findings, however, are similar to those of a study that has assessed the internet as a source of information for spinal surgery, which found that information was of low quality and very variable.

We choose to study lumbar discectomy as disc prolapse is a common condition and occurs in a younger population than other degenerative lumbar diseases. It has been
shown previously that younger patients are more likely to access the internet for information.20

The internet has heralded a more active role of patients in the management of their illness or disease. Doctors need to be aware of this and have an understanding of the information resources that are available for their patients. While it is impossible to regulate videos and other sources of information on the internet, care should be given by the medical profession when posting videos.

We feel that the information in these videos should allow viewers to be able to make an informed decision on their management. The information therefore needs to be similar to that of the informed consent process, and should address: the pathophysiology and natural history of the condition; management options available to the patient; how the procedure may be performed; the likely recovery and outcome of the procedure; risks and complications that may be encountered; and where more information can be found. As the internet remains an unregulated source of information, spinal surgeons need to be aware of where to direct patients to look for appropriate information.

Conclusions

This study shows that some of the videos available on YouTube™ meet what we feel would be the minimum standard required for patient information. The unregulated nature of YouTube™ means that many videos fail to meet a basic standard in conveying the information required for patients. Care should be taken by health professionals who are broadcasting videos that all relevant information is available on the Internet. Currently, we would not advise patients to use YouTube™ as a source for information relating to lumbar discectomy.

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