

Evidence-based approach for surgery during COVID-19: Review of the literature and social media

Editor

Introduction

The rapid global spread of COVID-19 presents an unprecedented crisis for the surgical community. We aimed to identify specific and ongoing challenges in the surgical community by reviewing the current available literature on COVID-19 and surgery and analysing the social media.

Methods

The literature was reviewed following the PRISMA statement on PUBMED library, searched on May 23rd 2020, using “COVID-19”, “COVID 19” with “surgery” syntax.

Social media analysis focused on the Twitter®, using ‘COVID19 AND SURGERY’ syntax, performed on Talkwalker®, on April 20th 2020 and revisited on 25th of May 2020, to identify the dynamic changes of surgical challenges. Engagement metrics (EM), calculated based on the number of likes, comments, shares and clicks, were reported as a demonstration of the tweets impact.

Results

The literature search returned 2393 studies, of which 625 were included. 300 (48 per cent) articles were classified as level 4 or 5. The most prevalent publications were editorial and commentary reports (247) and experienced based recommendations (127) and letters to the editor (84). The evidence-based publications included qualitative studies (34), systematic reviews (8) and observation studies (15). Common themes included Personal Protective Equipment and impact on elective and cancer surgery.

Social media analysis of the Twitter in April 2020, identified 4800 tweets on COVID19 and surgery, retweeted 600000 times with a potential reach of 15 million users. In May 2020, only 59

Table 1 Comparison of topics and themes from Twitter on COVID19 and Surgery

April 2020		May 2020	
Twitter Topics	Twitter Themes	Twitter Topics	Twitter Themes
Issue of COVID19 testing prior surgery	‘threatened’, ‘protection’	Delays in cancer surgery	‘collateral’, ‘delays’
Mortality and pneumonia after surgery	‘respirators’, ‘elective’, ‘mortality’, ‘incubation’, ‘pneumonia’	Patient prioritisation for cancer surgery	‘outcomes’, ‘damage’
Cancelling of cancer surgery & What defines ‘urgent’	‘define urgent’		
Return to surgical activity	‘government’		

tweets were recorded, retweeted 129 times with a potential reach of 1 million users. In April 2020, the most prominent topics were patient testing for COVID19 before surgery (EM = 109), testing as a prerequisite for cancer surgery (EM = 202), the lack of official guidelines on what defines ‘urgent’ surgery (EM = 300) and the cancellation of cancer (EM = 109). Later on, the most prominent topics were dealing with the collateral delays in cancer treatment (EM = 89) and the patient prioritisation for cancer surgery (EM = 100). *Table 1* summarises the themes of SR and SM analysis.

Discussion

The results of our systematic review highlighted the disproportioned number between the recommendations, positions statements, guidelines^{1,2,3} and the evidence-based literature^{4,5}. Whilst these guidelines and recommendations are undoubtedly offered with the best of intentions, they are not underpinned by evidence specific to COVID19 and may not represent best practice.

As the pandemic continues, so do the challenges faced by the surgeons and the public. The social medical analysis highlighted that during the lockdown, the concern related primarily to the testing for COVID19 and lack of governmental guidelines relating to who can receive surgery. As surgical services slowly reopened, the concerns are mainly about how to best manage

and prioritise cases with the collateral delays of cancer treatments.

Both the social media and literature analysis highlighted that above everything, the healthcare professionals are in constant need of structured guidance as how to best normalise their surgical practices amidst COVID19 pandemic. Considering the uncertainty about the duration of this pandemic, and the lack of evidence-based recommendations, the current concern of the surgical community is how to best deal with the systemic repercussions of the pandemic on cancer treatment.

Author contributions

The study was conceived by all authors. Literature searches and review was performed by NJC and NS. Social media analysis was JM and TV. The manuscript was drafted by TV and NJC and critically revised and agreed by all authors.

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