Current Debates in Surgery – A Cross Sectional Study amongst Indian Surgeons

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Abstract Surgery like all fields of medicine is evolving rapidly and these new techniques are challenging to replace the existing ‘standard of care’. Though some of these advances are here to stay, many of them are driven by a handful of surgeons influenced by market forces. In some controversial topics, there is a problem of plenty and it is difficult for a general surgeon to choose from the various options available. In order to address some of these contentious issues, a cross sectional, questionnaire based study was designed. The questionnaire was posted to surgeons across the country and it included 11 questions (single best answer format) on the current debates in surgery. The questionnaire was answered by 778 surgeons and gave rise to interesting observations. The practice of surgery is an interplay of patient- surgeon and market forces and more comprehensive studies are required to address these controversial topics in surgery.

Keywords Debates • Surgery

Background

In all fields of medicine, there are certain issues which will always remain controversial and would continue to be a

source of scientific debates during meetings and conferences. There are million of studies going on in search of the best evidence yet the best evidence continues to elude consensus. Surgery being a combination of science and art is even more consensus dodging leading to many questions for which there is no unanimity. Practice of surgery continues to evolve at a pace seen never before. The revolutionary pace of evolving technologies continues to topple the ‘standard of care’ surgery to ever shifting metrics making emergence of best evidence a mirage. In order to address some of these contentious issues in the background of unattainable unassailable evidence, a cross-sectional study in the form of an online survey was undertaken.

Materials & Methods

This cross sectional survey was carried out from February 2012 to March 2012, in the form of a questionnaire mailed to surgeons using the internet. The study population included surgeons from across India and they had to choose the single best answer from the options given for each question. There were eleven questions included in the questionnaire, which covered some of the most controversial issues in surgical practice. One surgeon could only answer the questionnaire once and the identity of the surgeon was kept completely confidential.

Observations & Results

The questionnaire was answered by 778 surgeons over a period of 1 month. The identity of the surgeons was kept confidential. The data was analyzed using and the following observations were made:

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1. Regarding Robotic surgery, which of the following is your opinion?

It was observed that 74.3 % of the surgeons were of the opinion that robotic surgery is a hope for some surgeries and hype for most given the current firmament of surgical practice. More than 12 % for surgeons were of the opinion that robotic surgery is likely to replace open & laparoscopic surgery in the near future.

2. Regarding Breast Conservation Surgery (BCS) for breast cancer, which of the following is true?

Forty seven (47 %) of surgeons were of the opinion at most BCS' happens in the hands of untrained surgeons and modified radical mastectomy (MRM) still should be the gold standard in the circumstances where an adequate infrastructure for evaluation for selection of suitable candidates for BCS is still a problem. More than 43 % surgeons were of the opinion that most surgeons & patients are poorly informed about BCS.

3. Should patients be given video recording of their surgeries?

More than 40 % surgeons were of the opinion that videos of their surgeries can be given to the patients on demand while another 34.8 % were of the opinion that videos should become a part of the standard medical records to reduce the number of potential litigations.

4. Can social media like Facebook become an academic tool for the surgical community?

More than 36 % surgeons felt that social media like Facebook could not become an academic tool for the surgical community as it can be misused as a propaganda tool. More than 27 % surgeons were of the opinion that the face book will not work as most surgeons/patients do not visit these internet sites frequently. Only 26.2 % surgeons were of the opinion that it would be an easily accessible and effective academic tool for the surgical community.

5. In your opinion, is bariatric surgery an acceptable modality to achieve "long term" weight loss?

About 65 % surgeons were of the opinion that bariatric surgery can work better if offered with other modalities like exercise, psychotherapy, medicines, etc. while 22.1 % of the surgeons felt that stand alone obesity surgery is a market driven hype.

6. Which of the following operative procedures is most suitable method of bariatric surgery for Indian patients?

About 51 % surgeons are of the opinion that Sleeve gastrectomy is the most suitable operative bariatric surgery procedure for Indian patients.

7. Which would be the surgical procedure of choice for the management of "your own" unilateral inguinal hernia?

Majority (70.1 %) of surgeons were of the opinion that they would prefer Open Lichtenstein's tension free mesh repair if they developed an unilateral inguinal hernia.

8. Which is the most acceptable surgical procedure if "you" develop bilateral inguinal hernia?

Almost half (45.6 %) of the surgeons would prefer a Laparoscopic Totally extra-peritoneal (TEP) as the surgical procedure, if they were to develop a bilateral inguinal hernia. About a third (36.9 %) of the surgeons were of the opinion that they would prefer Open Lichtenstein's tension free mesh hernioplasty.

9. Which of the following would be your surgical procedure of choice if you were to develop cholelithiasis?

Majority (79.5 %) of the surgeons were of the opinion that they would prefer a conventional four port laparoscopic surgery for the management of cholelithiasis. Only 10 % surgeons voted for SILS (single incision laparoscopic surgery).

10. In the event of you developing an incisional hernia (5×5 cms), which would be your surgical procedure of choice on yourself?

One out of two (46.3 %) of the surgeons were of the opinion that Laparoscopic mesh hernioplasty is the procedure of choice for an incisional hernia (5×5 cms) in size.

11. Preferred surgical modality, if you were to develop varicose veins with perforator incompetence?

Almost 60 % surgeons were of the opinion that they would prefer to undergo subcutaneous endoscopic perforator surgery (SEPS) for the treatment of their varicose veins with perforator incompetence.

Discussion

This questionnaire highlights the views of surgeons across the country about ongoing debates in surgery. Regarding Robotic surgery, which is a new and an upcoming field, majority of the Indian surgeons (74.1 %) were of the opinion that it is for a great advance for a handful of surgeries. This statement is in accordance with the 2010 annual report of Intuitive Surgical Inc., which clearly states that over 70 % of the overall procedures carried out on the DaVinci system were radical prostatectomies and hysterectomies. The use of robotic surgery in other fields was less common [1].

Breast cancer is a common malignancy in Indian women and with advances in screening modalities; more and more early breast cancer cases are being detected. The role of breast conservation surgery (BCS) is well defined in the guidelines to treat breast cancer patients but almost 47 % of Indian surgeons are of the opinion that most of the BCS' is being

carried out by untrained surgeons and they feel that MRM (modified radical mastectomy) should still be the gold standard of care till an adequate level of awareness, training and accreditation evolves. This was supported by the observation that 43.3 % of the surgeons feel that the surgeons and patients are poorly informed about BCS as of now.

Social networking sites and internet are playing a huge role in shrinking the world into a global village and making it a flatter domain for information and knowledge dissemination. Recently, many doctors and patients are using internet sites as a platform to share their experiences with the rest of the world. Although they are beneficial to some, these sites are liable to misuse and thus portray a potentially misleading picture in the minds of patients and doctors. These websites can only become effective tools for dissemination of knowledge, if they are regulated by certain authorities [2, 3]. More than a third (36.8 %) of the surgeons in this survey were concerned that these sites act more as propaganda tools rather than the means of spreading knowledge. This may actually shift the focus from ‘evidence based’ to ‘eminence based medicine’. Only 26.2 % surgeons were of the opinion that it is an effective tool for the spread of information.

It is a common knowledge that achieving weight loss is a multi-modality team approach rather than just bariatric surgery and this fact was supported by majority (65.6 %) surgeons that were of the opinion that bariatric surgery can work better along with an integrated multi-modality approach [4, 5]. More than one in five (22.1 %) of the surgeons were concerned about the market driven nature of the current bariatric practices. With regards to Indian patients, 51.7 % surgeons were of the opinion that Sleeve gastrectomy is a suitable option.

Conventional four port laparoscopic cholecystectomy is the ‘gold standard’ treatment for gall stones but perception that SILS (single incision laparoscopic cholecystectomy) would soon become the procedure of choice for gallstones, seems to be gaining ground. A clear majority (79.5 %) of the surgeons that took part in the survey echoed their preference for the conventional laparoscopic cholecystectomy. Only 10 % surgeons would prefer to undergo SILS, if they were to develop cholelithiasis. These findings are in accordance with some of the recent studies, which have not demonstrated any significant advantage of SILS over conventional four port laparoscopic cholelithiasis [6–8].

There is a theoretical consensus about the indications for laparoscopic inguinal mesh hernioplasty being bilateral and recurrent inguinal hernias, but due to the popular appeal and market driven factors the laparoscopic approach continues to be offered for unilateral inguinal hernias as well [9]. Current survey highlighted that majority (70.1 %) of surgeons would prefer an open tension free mesh hernioplasty compared to a laparoscopic inguinal hernioplasty, if they were to develop a unilateral inguinal hernia. In a situation of

a bilateral inguinal hernia, 45.6 % would prefer a laparoscopic TEP, whereas 36.9 % would still prefer to undergo an open tension free mesh hernioplasty on both sides.

In the survey, 46.3 % surgeons were in favor of a laparoscopic ventral hernia repair for an incisional hernia of 5 × 5 cms, whereas 28.9 % surgeons were in favor of an open onlay repair. This preference for the laparoscopic repair of ventral hernias (LVHR) is supported by the available evidence making the LVHR as the ‘standard of care procedure’ [10]. That it is not the ‘gold standard’ yet for the ventral hernia is supported by the dissenting opinion of almost one third of surgeons from the current survey.

Majority of the surgeons (60.3 %) in this survey would prefer to undergo SEPS (sub-fascial endoscopic perforator surgery) for the management of their varicose veins with perforator incompetence. Recent studies have shown that SEPS is a safe and effective modality for the treatment in a selected sub-group of varicose vein population predominantly manifesting as chronic venous insufficiency attributable solely to demonstrable perforator incompetence [11].

The current survey was conducted with the aim of helping in generation for evidence for a surgeon’s perspective consensus. Given the number of surgeons that participated and the relatively larger group not having participated the results can at best be seen as an index of general surgical fraternity opinion. Practice of surgery is an interplay of Patient-Surgeon and the market forces. Given this multi-factor nature and the heterogeneity of infrastructural availability more targeted and multi-domain surveys have a potential of guiding us further. Given the brevity of the life cycle of technology from technology being developed to it becoming obsolete and the newer technologies getting surgical integration before a supporting evidence, it is natural to have fluidity in opinion being a perpetual process. Hence the results of any one such survey will only be a contemporary guide to design future studies for a robust evidence. The nature of debate leads to another debate as robotics is progressing to computer aided surgery and laparoscopic surgery in future where parietal entry will be tiny and larger/bigger standard size instruments would be assembled inside the abdomen after the initial entry making the debate about the need of SILS redundant. On 30 April 2012 the US Food and Drug Administration (FDA) approved the *Percutaneous Surgical Set*, the first surgical instrument set that can be assembled and disassembled inside the body during minimally invasive laparoscopic abdominal surgery [12]. It describes the device as offering the “cosmetic benefit of needlescopic surgery and the performance of traditional laparoscopy.” According to the manufacturer, this is accomplished by laparoscopically attaching a full-sized 5-mm or 10-mm instrument head to a 3-mm shaft introduced percutaneously. This supports the need for continuing surveys to gauge the evolving dynamics of surgical thought process.

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