Surgical Considerations Prior to Colorectal Cancer Surgery

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Isaac Seow-En and Francis Seow-Choen

Take Home Pearls

- Age is not the sole criterion against the use of surgery for colorectal cancer.
- The elderly should be optimized for surgery and surgery carried out as soon as practicable.
- The aims of treatment should be well spelt out to ensure a satisfactory outcome from all sides.
- Appropriate informed consent and understanding of the elderly and their families are important before surgery.

5.1 Introduction

The Chinese have a saying: 'the family with an aged person has a precious treasure'. Age in itself is not a problem. However with age comes deterioration of somatic and psychosocial functions, health and a less favourable response to trauma including surgical stress (Tan et al. 2010). As we assess the elderly coming with various medical conditions for surgical correction, we have to consider the elderly as a whole person within the environment of their daily life. There are other chapters in this book that deal with psychosocial, nursing, rehabilitative management of co-morbid conditions,

I. Seow-En, MBBS
Resident, Seow-Choen Colorectal Surgery PLC,
290 Orchard Road Paragon #06-06,
Singapore 238859, Singapore

F. Seow-Choen, MBBS, FAMS, FRCSEd (✉)
Medical Director, Fortis Colorectal Hospital,
19 Adam Road, Singapore 289891, Singapore
e-mail: seowchoen@colorectalcentre.com

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assessment of fitness for surgery, etc. Therefore in this chapter, we will confine ourselves to what we consider surgical considerations prior to surgery for the elderly. In this regard, colorectal surgeons have to be especially careful as a great majority of their patients are 'elderly'. We have avoided in this chapter any designation or definition of the word elderly with regard to chronological age. As health providers, we are all well aware that chronological age does not correlate exactly with biological age. We have treated and even operated on nonagenarians who have been healthier than sexagenarians with regard to physical and psychological body functions. So as we discuss surgical considerations in the elderly, we talk of those who are not just elderly in chronological age but also of those who might not be so old in chronological age but whose somatic conditions qualify them as elderly. Age alone therefore is not a predictor of major complications after colorectal surgery including laparoscopic surgery. Elderly people with colorectal cancers or its complications should not be denied elective surgery (Tan et al. 2006). An elderly person with no co-morbidities will do better than a younger person with multiple co-morbidities. Furthermore, it had been noted before that it is not the individual co-morbidity but the quantification of overall co-morbidities that are important in predicting perioperative mortality (Tan et al. 2011).

5.2 Assessment for Surgery in the Elderly

The surgical management of the elderly often revolves not just on the surgery itself but also on the co-management of a whole host of other co-morbid conditions which may make the patient at high risk for anaesthesia and surgery. This subject is discussed in another chapter but suffice to say here that adequate pre-surgical preparation and the involvement of other specialists may be vital to good outcome in such patients. Conditions which are reversible must be carefully looked at and corrected; including but not limited to fluid and electrolyte abnormalities and other co-morbid conditions. However, it must also be said that many such conditions may be optimized but they may not necessarily be totally reversible. Such is the effect of age on the human frame. In such situations, it behoves the surgeon to recognize the situation as such and get on with the patient who is the fittest he will ever be without the needed surgery. Early surgery in such patients will be life saving (Lan et al. 2000). Surgery for colorectal cancer should be performed early once the patient is optimized. A short period of prehabilitation may improve surgical outcomes. However, postponement of surgical intervention until tumour complications arise is more likely to be associated with a poorer outcome (Tan et al. 2006).

5.3 Tailoring the Indications for Surgery to the Needs of the Elderly

The time will come, after all co-morbid imbalances and problems have been corrected and the patient now declared as fit as he will ever be, for the timing and approach to surgery to be discussed with the patient. Indications for colorectal cancer surgery are often considered under two subdivisions: (1) surgical conditions

Table 5.1 Common indications for surgery in the elderly with colorectal cancer

1. Curative resection of primary/recurrent colorectal cancer
2. Palliative resection of primary/recurrent colorectal cancer
3. Resection of cancer for bleeding/anaemia
4. Resection/diversional procedures for intestinal obstruction
5. Restoration of intestinal continuity/closure of stomas
6. Management of cancer-related intestinal fistula
7. Resection of secondary cancers, e.g. Krukenberg's tumours, Sister Joseph's nodule, etc.
8. Surgical procedures for relief of biliary obstruction
9. Surgical procedures for relief of ureteric obstruction
10. Surgical procedures for relief of ascites/pleural effusion

where surgery is mandatory and (2) surgical conditions where surgery is one of the options. In truth, these are false divisions. A sensible approach to the management of these elderly patients is of utmost importance in obtaining a good outcome. The treatment goals need not necessarily be the same as those of surgical treatment for someone much younger or fitter.

The timing and type of surgery undertaken must be carefully thought out. The surgeon managing an elderly person should have at his disposal good knowledge of all the possible techniques of dealing with the particular problem faced by the elderly under his care. Not all the commonly encountered problems seen in the elderly patient must be dealt with by surgery alone (Table 5.1).

The most efficacious treatment of curative colorectal cancer is still surgical extirpation. Where the patient is fit, surgery still remains the simplest and easiest method of curing a patient presenting with colorectal cancer. For potentially curable colorectal cancer, no effort should be spared to ensure and optimize patients for surgery. This statement however should be moderated in patients where the frailty of age or the presence of severe disease demands. It is still a truth that a live patient with a potentially deadly cancer is still better than a dead patient with all cancer in his body removed. Having said this however, the surgeon should not shrug off the responsibility of a thorough explanation and discussion of the purpose of surgery or any other treatment with the patient and relatives. The risks and benefits of each technique or procedure should be carefully weighed, assessed and tailored to the preference of the patient. The patient's goal for accepting treatment must be elucidated. If the patient and family accept the risks and benefits of surgery, the surgeon should then be prepared to go ahead and perform the surgery as skilfully as possible.

5.3.1 Examples of Surgical Decision Making in the Elderly

We recently treated an elderly 91-year-old lady who was relatively fit. She had just recovered from pneumonia and her infection had cleared. Her only other co-morbid factor was early dementia but otherwise she was communicative and had a positive outlook. Her relatives explained that she had good long-term memory retention but that she had very poor short-term memory. She had been seen by another surgeon

who had diagnosed cancer at 9 cm from the anal verge and advised her for abdominal perineal resection. CT scan revealed the cancer to be T2N0M0 stage. After speaking with the original surgeon, it was found that the reason for advising an abdominal perineal resection was the age of the patient and location of the cancer. Her relatives were frightened at the prospect of managing a stoma bag, and the patient herself was unable to grasp the concept of a stoma. We had a thorough discussion regarding life expectancy for a 91-year-old and the sort of surgery that would be least intrusive and traumatic as well as the possibilities of needing any sort of stoma bag including the use of a defunctioning stoma. It was elucidated that the patient felt that having a stoma would greatly reduce her quality of life. It was decided that her goal was to continue to have good quality life, and she was not too particular about her life expectancy. We thus planned for a laparoscopic low anterior resection without a total mesorectal excision, accepting a higher risk of inadequate oncological clearance. However in doing so, we were able to perform primary anastomosis without the need for a defunctioning stoma and her post-operative bowel function would be better. And indeed she recovered well and was discharged 3 days following surgery.

In the palliative setting, the same considerations prevail. If surgery is the best way to moderate the effects of the disease, then the good surgeon should thoroughly explain this to the patient and relatives and do whatever is needed for the patient to have a life that is meaningful. Where surgery is not needed, then the alternatives should be carefully explained and the patient advised accordingly. We recently saw an elderly patient with a sigmoid cancer which was not obstructing and was in fact asymptomatic. He was being investigated as routine blood tests showed an extremely high carcinoembryonic antigen level. PET scan showed massive liver replacement by secondaries and there were lung metastases as well. He was referred for chemotherapy but 3 months into this therapy, he developed abdominal distension and evidence of intestinal obstruction at the sigmoid cancer level. Further imaging revealed minimal response to the chemotherapy. Major surgery including laparoscopic surgery may indeed improve his symptoms, but it also had the risk of causing detrimental effect on his life expectancy and short-term quality of life. We decided therefore to advise him for an intraluminal colonic metal stent. This was inserted with a good response and the patient was asymptomatic thereafter for a further 6 months before he died from advanced disease.

In situations where the effects of the disease are such that treatment is urgently needed but where the co-morbid state of the patient contradicts extirpative surgery, other less risky alternatives should be sought and discussed with the patient and caregivers. An example of this was a patient we saw with advanced recurrent colorectal cancer with metastases to the peritoneum, liver and lung. He presented to us during palliative chemotherapy with recurrent intestinal obstruction. The patient was in obvious pain and distress, and the abdomen was severely distended with a midline scar and a left iliac fossa end colostomy. Blood investigations revealed severe hypoproteinaemia and CT scan showed small bowel obstruction by likely peritoneal nodules. It would have been easy for us to dismiss this problem as being untreatable and to advise continuous nasogastric suction and increase in the prescription of pain killers. However, together with the patient, we decided that we should make life more meaningful for this patient if we could enable him to eat and

defaecate and would thereby also decrease his pain. We performed a water-soluble contrast follow through to get a better picture of the problem. Fortunately for the patient, we found the obstruction to be at the mid- to distal ileum. It was then reasonable to consider performing a small procedure to divert the bowel proximal to the obstruction. We planned for an ileostomy and decompression through a small right iliac fossa incision. If that had failed, we had counselled the patient that then purely palliative measures would be appropriate. As it went, we managed to do a hassle-free procedure and the patient recovered quickly and was able to eat and defaecate for about 7 months before succumbing to massive liver secondaries.

5.4 Practical Aspects on Consent for Surgery in the Elderly

Most elderly patients are able to make decisions regarding surgery and other options for treatment on their own (Table 5.2). Some however are dependent on their relatives to make these decisions for them. This sort of situations are not infrequently encountered and may be due to deteriorating mental function of these elderly, lack of understanding of the elderly regarding the intricacies of the proposed treatment, dependence on relatives for housing or other financial support or even just due to relatives who want to take control over these elderly relatives. These issues vary depending on the patient's racial and cultural background. Obtaining consent for treatment and surgery in the elderly is therefore often a difficult process. Where the elderly patients are able to understand and want to take the responsibility themselves, this process may be quicker but the surgeon will often find younger members of the family or extended family who will then raise other issues or problems and insists on another round of explanation. Sometimes in patients with large families, these sorts of family meetings can be repeated with different relatives claiming to be the one in the need to know and the one to make the ultimate decision on treatment.

Our advice is to make sure that the patient is at the centre of all these discussions. It is important to make every effort for the elderly patient to understand his or her medical condition and the rationale of the suggested treatment and alternative options. A unified goal of treatment needs to be determined between the surgical team and the patient. For an elderly patient with chronic illnesses and disabilities, long-term survival may not be the most important priority; loss of independence,

Table 5.2 Information to be given to patients when obtaining consent

1. The reason and purpose of the intended surgery in the language understood by the patient and relatives
2. Other options available or not suitable for the particular patient and his condition
3. The likely risk and benefits of the surgical procedure
4. The operating surgeon should be the one taking consent, but if he is not the one, an explanation of who will be in charge should be given
5. A reminder to the patient that he or she has the right to another opinion and that he or she can refuse consent at any time even after signing

quality of life and burden on caregivers may take precedence. It has been shown that the preference of the patient may differ widely from what the surrogate and physicians' understanding of their preference may be (Tan et al. 2010). As such, a thorough understanding of the patient's preferences and priorities is important in this decision-making process, and good patient education facilitates elucidating of these preferences when the patient understands more about their condition and potential best and worst outcomes.

Where the patient is of sound mind and able to comprehend all the intricacies of treatment, the patient should be the one to make the final decision regarding treatment. In all situations but especially in a multicultural or multi-language environment, it is imperative that the surgeon speaks simply and clearly with the patient and his relatives to avoid any misunderstanding. It is imperative, for the patient's and surgeon's sake, that explanations regarding surgery involve as many members of the immediate family as possible. Family dynamics are often not clear and many families have many other reasons why an elderly should or should not have the recommended treatment, and many of these may or may not be medically based. In Asia, we often encounter the situation whereby members of the family for whatever reason good or bad press the surgeon to hide material facts regarding diagnosis or treatment from the patient himself. Sometimes their requests may be innocuous. Relatives may say that they do not want the patient to worry excessively and that the surgeon should not use the word cancer in discussing treatment but say something like tumour or growth instead. At other times, their requests may be downright misleading or untruthful. Our policy is to ask the patient whether they want to know of their condition; most elderly actually prefer to know the diagnosis than to be kept in the dark. All communications and issues discussed should be clearly documented for future reference.

Where the elderly patient is not capable of making the decision himself, a family conference should be called. The one responsible for all the decision making regarding the patient should be identified as early in this process as possible. The surgeon should satisfy himself by direct questioning of the relatives that this particular person is the one to make the final decision and is the contact person in all medical emergencies.

In many countries, patients may have to pay out of pocket for any surgical intervention. In such situations, the caregiver or the patient himself will have to undergo financial counselling and a detailed estimation of the entire cost of the surgery spelled out. The costs of each sort of surgery will vary from country to country and even within each country depending on whether payment is by insurance or government or by the patients themselves. The goals of treatment as well as the costs of achieving these goals must be discussed to avoid the situation where the patient may end up cured or worse still in worse health but without further financial capability to see himself through the future. In our practice, elderly patients with colorectal cancer are always told about the costs of laparoscopic surgery versus those of open surgery. The risks and benefits are thoroughly discussed to enable patients to make an informed decision about the effects of surgery on them but also about the effect of any financial burden on their resources following surgery.

5.5 Details of Surgical Procedure and Consent

There are three options possible as far as the amount and content of information to be given to patients prior to any medical intervention (Wheeler 2006). The first option is that of the exhaustive informed consent. Although laudable, this option is not practicable although the phraseology is thrown about often enough. The second option is that of what a group of reasonable surgeons would do in similar circumstances. This is by far the most commonly used principle and is known as the Bolam principle (Wheeler 2006). The third option is what a reasonable patient would want to know under the circumstances. This is again very reasonable place to start giving information.

What the surgeon should discuss during consent taking should be what any reasonable person would want to know before decisions can be made. By considering the position of the reasonable person, the surgeon would have fulfilled the legal requirements in obtaining consent. However, there is increasing scrutiny of the particular patients' particular circumstances. In recent years, there is an increasing dichotomy of views regarding what or who may be defined as being reasonable. Barriers to this process include reasons ranging from a lack of education, low intellectual quotient, deteriorating mental faculties, cultural barriers, social-psychological difficulties as well as many other reasons peculiar to the patient and family.

The Bolam principle established the criterion that reasonableness can be extrapolated by reference to the views of a group of comparable doctors. What is reasonable therefore from this point of view is what a group of doctors in the same situation with the same training would do.

Personally, we take the view that in our obtaining consent, we behave as a group of reasonable surgeons would and give the information they would consider relevant to the surgery at hand. We would at the same time also consider the point of view of the reasonable patient and expect that level of information to be given which would allow a non-surgically trained person to understand and digest the information sufficiently to make a good personal decision regarding what he or she ought to do in their situation. The current and prevailing view regarding consent for surgery is that surgeons have a personal duty to inform patients of the risks and benefits of the intended surgery in so far as those risks and benefits are commonly or specifically associated with the surgery in question. A practical approach is to provide information in these two following areas:

1. Common risks of the treatment and procedure
2. Less common risks but may have significant impact if they do occur

5.6 Patient Education

The undertaking of major surgery is a major life event for anyone, especially in the elderly patient where there are profound implications of increased dependence and risk of morbidity and mortality. This may not be recognized by the surgeon who

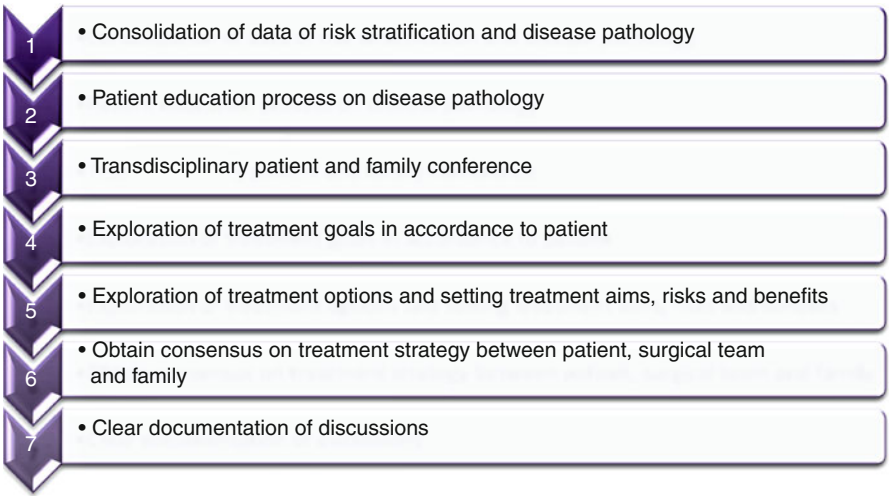

Fig. 5.1 Alexandra Health, Khoo Teck Puat Hospital Geriatric Surgery Service step-wise consenting process

performs similar operations in frequently. Many patients, do not know what to expect and they have to deal with fears of the unknown. Patient and family education play an important role in alleviating these fears and have a positive impact on the patients' psyche for the operation.

The Alexandra Health Geriatric Surgery Service has a preoperative education package as part of the transdisciplinary approach to preoperative patient management. The nurse clinician takes on the role of the educator after the surgeon has discussed aspects of the surgery with the patient and family. The nurse clinician reinforces what the surgeon has said and furthermore educates the patient and family on what to expect in the perioperative period and what the patient has to do for himself/herself to ensure a good outcome. Examples of patients with similar conditions and operations can be shown to the patient and family to reassure patients of the high possibility of good surgical outcome. Patients are then likely to have a more positive outlook on their surgery. Compliance to treatment strategies may thus be improved.

This education process is part of the stepwise consenting process that is practiced by the service (Fig. 5.1).

Conclusion

Age by itself is not a risk factor in surgery for colorectal cancer in the elderly. Co-morbidities should be optimized and any surgery proposed should be done as soon as practical to prevent further complications from arising. Treatment goals must be well defined and the patient and their families should be well informed of what these treatment goals are as well as of the risks and benefits of the intended surgery.

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