Health-related quality of life overview after different curative treatment options in muscle-invasive bladder cancer: an umbrella review


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Introduction and background

This paper, written by researchers from Belgium and the UK, brings together the best evidence we have concerning health related quality of life (HRQOL) for people who have had treatment for muscle invasive bladder cancer. Bladder cancer is classed as muscle invasive when the cancer has grown far into the wall of the bladder. HRQOL is a measure of how a person perceives their own physical and mental health over time.

People diagnosed with muscle invasive bladder cancer may be offered a choice of treatments. The available choices will depend on a variety of factors, such as the experience of the surgeon or centre, the evidence about how likely a treatment will cure the cancer, and the individual lifestyle and preferences of the patient. The possible impact of on treatment on quality of life is a very important thing to consider.

The researchers looked at all published systematic reviews on this subject. A systematic review draws together all the available good quality evidence on a subject. These reviews are considered one of the highest levels of evidence on a given subject.

What did they find?

The researchers found thirty-two reviews which assessed the quality of life of patients treated for muscle invasive bladder cancer. The reviews include discussion about a number of treatments:

- **Radical cystectomy** is surgery to remove the bladder and other nearby organs. These organs are the prostate for men, and ovaries, uterus (womb) and part of the vagina for women. During the operation, the surgeon will disconnect the tubes that connect the kidneys to the bladder (the ureters). The tubes are joined to a short segment of bowel that is isolated from the rest of the intestines. This is then brought to the skin surface. The part of the bowel that opens on to the skin is known as a stoma or a urostomy. After surgery urine will flow through this stoma into a small bag, which needs to be emptied and changed regularly. In some cases, an artificial bladder (called a neobladder) can be created from a section of bowel. This removes the need for a stoma.
• **Robotic radical cystectomy**, is keyhole surgery to remove the bladder as above, using a robotic console (to help the surgeon during the surgery). The surgeon is in the same room and controls the robotic arms to perform the surgery. Keyhole surgery uses a number of small incisions rather than a large cut.
• **Pelvic organ sparing radical cystectomy** is surgery where only the bladder is removed, leaving other organs such as the womb and top of the vagina in place,
• **Radiotherapy and chemotherapy** can be used instead of bladder removal. Chemotherapy can also be given before the bladder is removed (this is called *neo-adjuvant chemotherapy*).

The researchers looked at all thirty-two studies together to see what we know about health-related quality of life after treatment for muscle invasive bladder cancer. Sadly only a few conclusions could be drawn as the researchers felt that much of the current evidence did not meet high enough scientific criteria. The conclusions they were able to reach were:

- The health-related quality of life was the same whether patient had open or robot-assisted bladder removal (with a stoma).
- Two reviews showed that bladder removal in women which left other pelvic organs in place could potentially be better for maintaining sexual function compared to radical surgery (where the womb and other organs are removed). However due to small numbers of patient studied, it was not possible to say absolutely whether quality of life was better.
- Patients who had a new bladder made from bowel had better overall quality of life outcomes compared to those who had a stoma. However, they had worse urinary function.
- People who had radiotherapy and chemotherapy showed slightly better quality of life with regards to urinary and sexual function, but worse gastro-intestinal (bowel) quality of life outcomes in comparison with those who had their bladder removed.

**Why is this important?**

When there are choices to be made about treatments for cancer it is important that people understand the risks and benefits in order to make a good decision. The benefits may include the likelihood or chance that a treatment will work, but risks of treatments are also very important and should be discussed and weighed up. Bladder cancer treatments can affect many things including urinary function, sexual function and body image, so the impact on quality of life is a vital factor to consider. This paper discusses the evidence we have about how treatments may affect this, but shows clearly that more work needs to be done to assess quality of life after treatments for bladder cancer.

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