Sphincter Preservation: A Never Ending Battle

Being the most underappreciated parts of the body and the very mention generally causes people to giggle and cringe, the rectum and anus are, however, important for one to eliminate the waste from the gastrointestinal tract. Symptoms from anorectal disorders are a common reason for visits to primary care physicians and specialists. Although most symptoms are due to benign conditions, malignancy of the rectum and anus needs to be carefully excluded.

Rectal cancer constitutes 30-40% of large bowel cancer, which is the third most common malignancy in the world. The disease was described in ancient time and considered incurable until the recent two centuries. In 1908, Sir Ernest Miles from England described abdominoperiineal resection which entailed removal of sigmoid colon, rectum, anus together with anal sphincter muscles. This procedure, although mutilating, had been the gold standard treatment of rectal cancer in most part of the 20th century.

In the late half of the last century, attempts were to preserve anal sphincters in rectal cancer surgery; however, the high local recurrence hampered the wide application of sphincter saving operation. The work of Sir Richard Heald who advocated total mesorectal excision with dissection along the embryonic plane revolutionized rectal cancer surgery. This coupled with improved knowledge of the disease, advances in surgical techniques and technologies, and application of multidisciplinary care. Restoration of bowel continuity can be more confidently performed with good local disease control nowadays. Advances in minimally invasive surgery further facilitate pelvic dissection and construction of a very low anastomosis. The recently popularized transanal approach actually represents the application of natural orifice surgery in major cancer resection.

The urge for sphincter preservation in rectal cancer treatment never ends. With the multidisciplinary approach and optimal application of chemoradiation, complete pathological remission can be achieved in some patients and organ preservation will certain be the objective of future treatment.

For over a century, the advances in rectal cancer treatment have mostly achieved the objectives summarized by Charles Mayo’s ‘Evolution in the Treatment of Cancer of the Rectum’ in 1903, in which he stated, “Certain definite results are desired in operations on cancer of the rectum, namely, permanent cure, low operative mortality and a controllable anus, or its best substitute.”