Euro Surgery 2020: Complete Mesocolic Excision and Central Vascular Ligaton in Colon Cancer Surgery, Feasibility and Outcome

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Background: Colon cancer contnues to be a major health problem worldwide. Being the third most common type of cancer in men and the second in women. Standard treatment of colon cancer is based on surgical resecton. An adequate number of lymph nodes harvested are important for a correct stabilizaton of the disease; thereby the extension of the colonic resecton remains controversial. Complete mesocolic excision (CME) with central vascular ligaton (CVL) has recently been found to improve oncological outcomes in patent with colonic cancer. Complete mesocolic excision is based on a correct identfcaton of the dissecton plan between the mesofascial plane and the retroperitoneal fascia, central vascular ligaton of the vessels to remove vertcal lymph nodes and resecton of the afected colonic segment. Methods: This is a prospectve study done at general surgery department of Fayoum University hospitals from January 2015 to January 2019 including 60 patents with operable colonic cancer operated with adequate surgical margin, complete mesocolic excision and high vascular ligaton. Results: The number of dissected lymph node was 27.7 ± 4.2 and this number is more than that dissected in the conventonal colectomy mentoned in many studies in literature, more over larger mesocolon area, longer distance from vascular high ligaton point to intestnal wall, and longer distance from vascular high ligaton point to tumor center were observed. Conclusion: Sitwall, omet nâi3 meŏ E TjD7 only curatve treatment and applying the principles of complete mesocolic excision and central vascular ligaton in colon cancer surgery can improve cancer outcomes without increase the incidence of postoperatve complicatons.

The colonic mesentery or mesocolon contains the vascular and the lymphatc drainage systems of the colon, so adequate clearance is necessary for colon cancer to have the same oncologic benefit as a total mesorectal excision for the treatment of patents with rectal cancer. In 2009, Hohenberger et al. [1] introduced a new concept trying to translate survival advantages to patents with colon cancer. This new concept of a complete mesocolic excision (CME) with a central vascular ligaton (CVL) in the management of patents with colon cancer represents a kind of evoluton in operatve technique. The concept of a CME as a surgical technique with sharp dissecton of the visceral plane from the retroperitoneal (parietal = somatc) one aims to avoid any breaching of the visceral fascia layer, which potentally may lead to tumor spread within the peritoneal cavity. With this procedure, the origin of the colonic arteries can be well exposed and ted centrally at their origins to ensure maximal harvestng of regional lymph nodes. CME and CVL surgery remove more tssue compared with standard surgery in terms of the distance between the tumor and the highly vascular region, the length of large bowel and ileum removed, and the area of the mesentery. In additon, CME and CVL surgery are associated with more mesocolic plane resectons and greater lymph node yields [2, 3].

In terms of oncologic outcomes, Hohenberger et al. [1] reported excellent cancer-specifc survival rates afer CME surgery (stage I, 99.1%; stage II, 91.4%; and stage III, 70.2%) [1]. Moreover, CME surgery is associated with beter disease-free survival than is a conventonal colon cancer resecton for patents with a stage I–III colon adenocarcinoma: the 4-year disease-free survivals were 85.8% afer CME and 75.9%

afer non-CME surgery (P = 0.0010). The 4-year disease-free survival for patents with Union for Internatonal Cancer Control (UICC) stage I disease in the CME group was 100% compared with 89.8% in the non-CME group (P = 0.046). For patents with UICC stage II disease, the 4-year disease-free survival was 91.9% in the CME group compared with 77.9% in the non-CME group (P = 0.0033), and for patents with UICC stage III disease, it was 73.5% in the CME group compared with 67.5% in the non-CME group (P = 0.13). Afer pr D M ά ʊ

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