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ERAS protocols in gynecologic oncology during COVID-19 pandemic

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The COVID-19 pandemic has turned the standard of care of medicine worldwide into a "public health emergency of international concern".[1] Cancer patients are a unique population in that they are vulnerable to COVID-19, particularly if immunocompromised, and also, their oncologic outcome is based on the type and timing of treatment.[2] Hospitals, in an attempt to protect cancer patients from COVID-19, are postponing or canceling clinic visits and treatment according to cancer acuity. This results in stress and anxiety in both patients and healthcare providers.

Due to the aforementioned reasons, there is a growing concern among cancer societies regarding the optimal management of cancer patients during this global crisis.[3]

Recently, Ramirez et al provided guidance for management of gynecologic cancer during the COVID-19 global pandemic.[4] Highlights include: (i) restriction of clinic visits to new patients or consults deemed absolutely necessary; (ii) grade 1 endometrial cancer may be considered for non-surgical options (eg, systemic hormonal therapy, intrauterine device); (iii) in patients with advanced disease (endometrial[5] and ovarian), obtain tissue diagnosis and start systemic therapy; and (iv) in patients where surgery is indicated (eg, high-risk endometrial histology, ovarian mass with high risk of malignancy), the risk of laparotomy must be weighed against the risk of laparoscopy (pneumoperitoneum and COVID-19).

For those patients that require surgery, strategies to prevent COVID-19 transmission during hospitalization have been proposed. These include pre-hospitalization testing for COVID-19-suspected patients, restriction of visitors, physical distancing, daily staff controls, and adoption of measures to decrease hospital stay. Hospitalization is dependent primarily on peri-operative management. Thus, now more than ever, evidence-based protocols focusing on surgical management of cancer patients need to be implemented. An example of such a tool to be deployed during this crisis is the Enhanced Recovery After Surgery (ERAS) protocol.

ERAS protocols have been introduced over the last decade in different surgical subspecialties, including our own, and constitute a growing evidence-based surgical paradigm.[6] These protocols include a multimodal approach to the pre-, intra-, and post-operative periods. The philosophy of ERAS is based on maintaining homeostasis during the peri-operative period and attenuation of the surgical stress response. The primary clinical benefits of implementing these protocols are shorter hospital length of stay and reduced post-operative complications (including respiratory complications) in low, medium and high complexity gynecologic oncology surgeries.[7] These are desired outcomes, particularly during the pandemic when inpatient beds and intensive care unit beds are increasingly scarce.

For centers that are looking to rapidly adopt an ERAS protocol[6 8] key components include:

- No mechanical bowel preparation
- Patients may eat a light meal up until 6 hours, and consume clear fluids including oral carbohydrate drinks up until 2 hours, before initiation of anesthesia
- Use of pre-medications (acetaminophen, non-steroidal anti-inflammatory drugs, anti-emetics)
- Maintenance of normothermia and euvolemia intra-operatively
- Avoidance of surgical drains and nasogastric tubes
- Infiltration of wound with local anesthetic
- Post-operative nausea and vomiting prophylaxis using ≥2 anti-emetics (multimodal approach)
- Early introduction of solid diet post-operatively (day 0–1)
- Multimodal narcotic-sparing post-operative analgesia (use of scheduled non-narcotic medications with oral narcotic medications only as needed)
- Peripheral lock intravenous when patient has 600 mL oral intake
- Remove urinary catheter on post-operative day 1 in the absence of contraindications
- Active mobilization.

As the duration of the COVID-19 pandemic cannot be estimated, the development of an appropriate treatment and an effective vaccine are of utmost importance. Until then, measures that reduce the adverse effects of the ongoing pandemic need to be taken. Implementation of ERAS protocols offer faster recovery for our surgical patients, allowing for hospital staff and

resources to be focused on those who need it most during this time of global need.

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