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INVITED COMMENT

Concomitant abdominal aortic aneurysm and rectal cancer: a treatment dilemma

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While the coincident presentation of abdominal aortic aneurysm (AAA) and rectal cancer is relatively rare, it is being encountered with increasing frequency as our population ages. Despite this, a recent survey of 46 general and vascular surgeons revealed a glaring lack of consensus in dealing with this problem [1]. This commentary aims to elucidate the principles of management, address conflicting issues and recommend context-specific treatment guidelines [2]. There is a consensus that with concomitant AAA and rectal cancers, the symptomatic lesion should be treated first [3, 4], and the cancer should be treated first if the AAA is less than 5 cm [1, 5]. Our commentary accepts these two premises and scrutinizes the dilemma posed when both lesions are asymptomatic, and the AAA exceeds 5 cm.

While there are ample, anecdotal reports of synchronous and staged treatments of AAA and rectal cancer, there is no evidence of the uniform superiority of one approach. Treating the AAA and cancer simultaneously raises the concern of either bacterial seeding of the graft or the risks associated with prolonged operative time. The arguments against this are that with appropriate bowel preparation, perioperative antibiotics and meticulous operative and anesthetic technique, these complications are avoidable. Those supporting a synchronous approach cite (1) avoiding the risks of a second, major operation and (2) obviating the risk of aneurysm rupture during recovery from colon surgery. Treating the cancer first with associated chemotherapy further raises the possibility of chemotherapy-related AAA growth and rupture [6]. Fixing the AAA first poses a risk of graft infection during subsequent colon surgery and increases the time to eventual cancer treatment, with any delay in recovery potentially increasing the complications and risks associated with cancer growth.

In the absence of evidence supporting a uniform approach to patients with coexistent AAA and rectal cancer, we acknowledge that decisions tend to be made based on surgeon experience and what seems most intuitive. Furthermore, we believe that the recommendations should be strictly individualized. Aneurysm size (an independent predictor of aneurysm rupture), cancer stage, patient co-morbidities and life expectancy based on either co-morbidities or cancer prognosis are all relevant in informing the management priorities The AAA should be treated first in a patient with a large AAA and a small, early-stage cancer. If, however, co-morbidities are prohibitive for the repair of a large juxtarenal AAA, we would suggest that the small cancer be treated first, and the AAA reassessed based on how the patient tolerates the colon surgery. Alternatively, in a healthy patient with few co-morbidities, the coexistence of a pre-obstructing cancer and a large AAA might merit concomitant treatment of both. With a large, non-metastatic cancer and a stable AAA less than 5.5 cm, we would recommend that the cancer be treated first. Both patients presented in this series had retroperitoneal aneurysm repairs first. We do not believe that there is a substantial advantage of the retroperitoneal over a transperitoneal approach in these cases. While the retroperitoneal approach might have a slight early morbidity advantage, this is not sufficient to justify fixing the AAA first in all cases. Finally, with advancing technology and the ever-widening applications of minimally invasive

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approaches to both cancer surgery and aneurysm repair, the treatment paradigms and priorities should continue to evolve.

It would be inaccurate to say that the decision making here should be based solely on a risk estimation of aneurysm rupture rates and cancer survival. As with any management decision involving uncertain outcomes defined by the quality and quantity of life, the best decisions are those that are well informed, individualized, with decision making shared between the patient and the surgeon.

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