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ASO Author Reflections: Robotic-Assisted Gynecologic Surgery in the Frail Elderly: Analysis of Perioperative Outcomes

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Over the past 50 years, economic and technologic advancements have led to a significant increase in life expectancy. In the United States, those 65 years of age or older will account for approximately 20% of the population by 2030. Over the same time period, the number of individuals older than 75 is expected to triple and the number of individuals older than 85 is expected to double [1]. An aging population poses unique medical practice challenges, especially with regard to surgery.

Elderly patients often have multiple comorbidities and can be frail, putting them at greater risk for the development of postoperative complications. Minimally invasive surgery (MIS) can be a good alternative to open surgery in this patient population, as MIS is associated with fewer complications without compromising surgical aggressiveness or outcomes. However, data regarding MIS in the elderly, especially those older than 80 years of age, are scarce [2].

Based on our previous experience in which we reviewed the surgical outcomes of 982 elderly patients (median age, 71 years) who had undergone a gynecologic procedure, robotic-assisted surgery appeared to be safe in this patient population, even in patients 85 year of age, a group generally at higher risk for unfavorable outcomes. Although robotic-assisted surgery appeared safe in these patients, age 85 was still significantly associated with major complications. Moreover, body mass index, age 85, and occurrence of a major complication were significantly associated with 90-day mortality [3], underscoring the need for careful patient selection in these scenarios.

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We speculated that these unfavorable outcomes may have been due to increased frailty caused by multiple comorbidities, impaired physical activity, and reduced performance status. As such, we sought to compare the characteristics of the frail elderly versus non-frail elderly patients in the cohort. We defined frailty phenotype based on the presence of 3 of the following 5 frailty factors: comorbidities (more than 5), low physical activity (cannot walk more than 1 block), weight loss, exhaustion (cannot walk up 1 flight of stairs), and fatigue [4].

According to our review of 71 frail patients, frailty was not associated with 90-day mortality risk. However, the frail elderly should still be considered high risk, as in our study, this population experienced longer hospital stays and more complications compared to the general, younger population [5].

Based on our results, we believe that robotic-assisted gynecologic surgery is feasible and safe in an elderly population, even in the most frail. Nevertheless, careful selection of surgical candidates is mandatory, and surgery must be offered only to properly selected patients.

Unfortunately, we still have limited data on this specific patient population, and larger, age-specific prospective studies are needed to confirm these preliminary findings. Collaboration between surgical and geriatric societies should be advocated to produce guidelines for adequately selecting surgical candidates and for optimizing the perioperative management of geriatric populations in a multidisciplinary setting.

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