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Online Clin Corr

Wk 5 LTC

Dr. Davidson

**Case #1:**

Mr. G is a 96 y/o M, presents for monthly visit at ADHC. Resides with daughter in private home with 4 steps. PMHx Alzheimer's dementia, HTN, Venous insufficiency in LEs, CKD, iron def anemia, OA, BPH, depression/anxiety, use of wheelchair. Pt initially states he “feels okay” but admits to R shoulder and hip pain upon further questioning.

**Questions:**

**Why do we perform calculated creatinine clearance in the elderly?**

 Creatinine clearance (CrCl) is widely used to estimate GFR. Creatinine is derived from the metabolism of skeletal muscle and dietary meat. As the total number of nephrons and GFR decreases with age, CKD becomes more prevalent and more advanced in older adults. We must perform calculated CrCl on a regular basis because many older patients are on polypharmacy and eGFR is critical in assessing renal status and adjusting doses and avoiding toxicity from build-up.

 **Sources:**

* <https://www-uptodate-com.york.ezproxy.cuny.edu/contents/the-aging-kidney?search=creatinine%20elderly&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H9530838>
* <https://www.medscape.com/viewarticle/762323>

**What is the survival rate for AAA surgery in the (very) elderly?**

 In the management AAA, the determination to undergo endovascular aneurysm repair (EVAR), open surgical repair, or observation depends on the size/morphology/location of the aneurism, its rate of growth, and the age and overall health of the patient. Younger patients with longer life expectancy will usually require repair at some point in their lives. For most patients, an unruptured AAA >5.5 cm or that has grown quickly (>2 cm) within the last 6 months warrant endovascular repair. Open surgical repair is indicated in cases where there has been a partial or complete rupture, or when rupture is imminent.

 Patients >80 y/o are at significant increased risk of rupture and mortality when considering endovascular repair. For patients >80 y/o, with renal dysfunction, loss of consciousness, and hemoglobin <9, the chances of survival following open repair of ruptured AAA is almost zero. Among patients >65 y/o endovascular repair is associated with an early survival advantage that gradually decreases over time.

One cohort study (n=39,966) found no significant long-term survival in patients >65 y/o who have undergone endovascular repair of AAA versus observation, although perioperative (30-day) survival rates were higher for EVAR than those with open surgery. The survival advantage of EVAR lasted only through the first 3 years. Those with medical comorbidities often die from associated illnesses.

 **Sources:**

* <https://www-uptodate-com.york.ezproxy.cuny.edu/contents/management-of-asymptomatic-abdominal-aortic-aneurysm?search=abdominal%20aortic%20aneurysm%20management&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H3585414>
* <https://www-uptodate-com.york.ezproxy.cuny.edu/contents/management-of-symptomatic-non-ruptured-and-ruptured-abdominal-aortic-aneurysm?search=abdominal%20aortic%20aneurysm%20management&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2#H933044043>

**What are the effects of general anesthesia on cognition in the very elderly?**

 There are a number of potential complications to consider in general anesthesia of older adults. Systematically, the most concerning complications are cardiac, pulmonary, hepatic, renal, and CNS. Regarding the neurological effects of general anesthesia in the very elderly:

 CNS: increased sensitivity to all IV agents that act on the CNS. There is loss of ventilatory response to hypercapnia and hypoxemia. Be very careful with resp depression from opioids, benzodiazepines, and volatile anesthetics.

 PNS: reduction in myelinated fibers resulting in higher pain threshold, contributing to delayed presentations of painful conditions such as appendicitis and peritonitis.

 Advanced age is a risk factor for perioperative neurocognitive disorders. Postoperative delirium is relatively common after major surgery in older patients (4-55%), up to 40% of those never returning to preop baseline. Postoperative delirium portends a greater decline in overall function and is associated with longer hospital stay, higher rate of discharge to a nursing home, and a higher rate of mortality.

 **Source:** <https://www-uptodate-com.york.ezproxy.cuny.edu/contents/anesthesia-for-the-older-adult?search=general%20anesthesia%20complications&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H251746700>