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INVITED COMMENTARY

Dementia and Poor Surgical Outcomes: Reinventing the Wheel or Providing Empirical Evidence?

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The increasing prevalence of dementia and its growing worldwide impact on public health and resources are well established [1, 2]. This article [3] is a large retrospective cohort study comparing the morbidity of surgery in 18,923 patients with dementia with that of 75,692 (age- and sex-matched) controls without dementia that had surgery. The study showed that (1) preoperative morbidity and average length of hospital stay were higher in the dementia group; (2) 30-day mortality, overall complications, and specifically stroke, urinary tract infection, renal failure, pneumonia, and septicaemia were higher in the group with dementia; this was significant after adjusting for several factors, including coexisting medical conditions; (3) caring for dementia patients is expensive!

So, what's new? Dementia as a preoperative risk factor is well known and these findings could have been predicted by most readers. In addition, studies of this nature do not analyse or explore "patient-level" data and can therefore demonstrate only a global view of the problem while ignoring the complexities of the interventions, the underlying pathologies, and the decision-making processes involved in the management of the individual patient.

While academicians may debate over the associative or causative influence of dementia and the mechanistic theories linking dementia and poor outcomes, what studies like this provide for clinicians is an estimate of risk, i.e., extent of the increase in morbidity that is attributable to dementia. These estimates can be used by surgeons and patients (with family members) in making informed decisions about the benefits and risks of surgery. They also help in targeting appropriate preventative strategies aimed to reduce risk of complications in dementia patients. Lastly, these estimates are also of value to health-care providers and policy makers to determine appropriate resource provision in a world where health care is burdened by the increasing prevalence of age-related dementia and constrained by financial limitations.

An important take home message from this study is the increased risk of 30-day mortality. This is, of course, influenced by the kind of surgery, coexisting medical conditions, and underlying pathology for which surgery is contemplated. Also, how this risk is interpreted and communicated to the patient is crucial to how clinical decisions are made. Taking "in-hospital mortality" as an outcome and extrapolating the numbers from Table 2, the data could be represented in one of two ways: "Surgery would increase the risk of in-hospital death in a dementia patient by 0.85 % (from 1 to 1.85 %)" or "The presence of dementia would increase the relative risk of in-hospital death by 85 %." Although both statements refer to the same underlying data set, the description of risk in absolute terms (i.e., the former statement) provides a clearer understanding of the issue and should be encouraged.

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