Androgen Deprivation Therapy and Risk of Alzheimer's Disease: Importance of Holistic Geriatric Oncology Assessment

Nead et al¹ have presented the results of a retrospective, nested, case-control study that demonstrated a statistically significantly increased risk of Alzheimer's disease (AD) in patients with prostate cancer who were treated with androgen deprivation therapy (ADT) compared with those who did not receive ADT. The authors highlight an important potential association between two common conditions in older men—prostate cancer and AD. A true causal link between treatment with ADT for prostate cancer and an increased incidence of AD has significant public health implications.

The authors address some limitations of their study. The mean age difference of the two populations under study, that is, 70.9 years for the ADT group and 66.7 years for the non-ADT group ($P < .001$), must be highlighted in our view. This age difference is fundamentally important as AD is a disease of aging, with incidence doubling every 5 years after age 65 years.² Those who received ADT were an older population and could be considered to be at higher risk of AD as a result of age alone.

ADT has a potential pathophysiologic pathway to AD, which has been highlighted in recent years^{3,4}; however, brain health is closely linked to overall cardiovascular health, and factors that increase the risk of cardiovascular disease are associated with a greater risk of dementia. ADT has been linked with cardiovascular disease, hyperlipidemia, and diabetes mellitus.⁵ All these are conditions increase the risk of AD, as shown by Nead et al.¹

Determination of the causality of AD is therefore increasingly more complex, and the possible impact of cardiovascular disease cannot be underestimated. Age, cardiovascular risk, AD, prostate cancer, and ADT are overlapping risk factors, and to determine an association between AD and ADT is far more complex than the authors acknowledge.

This article underscores the importance of developing the subspecialty of geriatric oncology. Geriatric medicine principles

and a comprehensive geriatric assessment can uncover numerous health problems in older patients with cancer and can influence treatment decisions.⁶ Identifying comorbid conditions and physiologic changes as a result of aging allows better assessment of risks and benefits and appropriate adjustment of treatment.

We would advocate a collaborative, patient-centered approach between geriatricians and oncologists in the management of all older patients with cancer. The results of Nead et al¹ support the need for a holistic approach to identify baseline comorbid disease, cognition, cardiovascular, and dementia risks as well as to have a longer-term follow-up screening for cognitive problems for older patients with prostate cancer to help our patients achieve the best possible outcomes.

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

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