Reviewer's report

Title: Diabetes related risk factors did not explain the increased risk for urinary incontinence among women with diabetes. The Norwegian HUNT/EPINCONT study

Version: 1 Date: 12 June 2009

Reviewer: H. Henry Lai

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All Minor Essential revisions:

1. Urinary incontinence from diabetes may be due to overactive bladder (urge incontinence), anatomic defects (stress incontinence), retention (overflow incontinence, from loss of bladder sensation or acontractile bladder), or mixed incontinence (urge plus stress incontinence). Quite understandably, in an epidemiologic study based on surveys without physical examination or further clinical evaluation (such as urodynamics), the type of incontinence cannot be ascertained. Patient reported symptoms are not reliable to distinguish the types of urinary incontinence. It is quite possible that association does exist between specific types of urinary incontinence and certain risk factors of diabetes, but the association cannot be demonstrated statistically because all types of urinary incontinence are grouped together during the analysis, or were incorrectly classified.

2. The correlation between more severe urinary incontinence, angina, and stroke is quite interesting. It is commonly assumed that dysfunction with autonomic nerves innervating the bladder (a neurogenic cause) attributed to certain aspects of incontinence, e.g. overactive bladder, poor sensation (diabetic cystopathy). The correlation between cardiovascular factors and more severe incontinence suggests the possibility that cardiovascular dysfunction of bladder smooth muscle and submucosal tissues (ischemia) may contribute to diabetic bladder dysfunction (cardiovascular and myogenic defects). Again, some of the confounding factors cannot be definitively ruled out. For example, are patients with incontinence simply sicker with more angina or stroke? Or do they have more incontinence simply because they have angina, stroke, were hospitalized, had foley catheters placed, developed urinary tract infection from foley, and reported more incontinence and more severe incontinence because of that? Cause and effects cannot be ascertained. Despite limitations of the study, the correlation between cardiovascular events and incontinence warrant further investigation.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.