The aim of the study was to examine the 10-year risk of stroke among patients with acute urinary retention (AUR) in Taiwanese patients aged > 50 years old using data from a Longitudinal Health Insurance Database covering the years 2001 to 2010. The authors found that 2805 of the 38,433 (7.3%) patients with AUR had strokes during the follow-up period compared with 1077 of the 37,356 (2.8%) controls (crude hazard ratio: 2.69; 95% confidence interval: 2.5–2.88). After adjusting for potential confounders, risk of stroke was increased in patients with AUR (hazard ratio: 2.36; 95% confidence interval: 2.19–2.53). Interestingly, the AUR group had higher ischemic type stroke (26.77%) compared with the non-AUR group (12.91%). The authors suggested that preventive measures should be taken for patients with AUR, which may be associated with an increased risk of subsequent stroke.

Previous animal studies could provide evidence explaining the current findings. In normal rats, vesico-vascular reflex (VV-R) evoked by distension or contraction of the urinary bladder (UB) and systemic arterial blood-pressure increase in parallel with graded increases in bladder pressure during UB contractions. The arterial pressor response to UB distension was significantly reduced by acute or chronic intravesical administration of resiniferatoxin or by capsaicin pretreatment. Chuang et al concluded that VV-R is triggered primarily by distension- and contraction-sensitive C-afferents located near the luminal surface and deeper in the muscle layers of the bladder, respectively. Furthermore, the vasoconstriction responses induced by AUR are associated with sympathetic activation, which may result in vasoconstriction and blood-pressure fluctuation.

The inherent drawback of using administrative data is that the findings cannot explain the causes and effects. Most patients with AUR will be easily treated in Taiwan, and we do not know how many of these AUR patients will transition into chronic urinary retention or have strong detrusor overactivity to induce pressor response. Otherwise, the association between AUR and subsequent stroke should not be over emphasized.

Conflicts of interest

The authors declare that they have no financial or non-financial conflicts of interest related to the subject matter or materials discussed in the manuscript.

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References


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