convulsions. Our patient had a seizure in the morning after overnight retention of urine. The anticholinergic effects of his drug treatment for schizophrenia may have been a contributing factor. Moreover, schizophrenic patients have been reported to have detrusor hypereflexia. Full bladder with possible outflow obstruction in presence of raised intraabdominal pressure during convulsions could have resulted in a ruptured bladder in our patient. The cystogram in our patient revealed the rent in the dome of the diaphragm. The bladder is protected anteriorly by pubic bone, inferolaterally by the urogenital diaphragm and obturator internus, leaving the dome unprotected, covered only by peritoneum. Our patient may have some similarity with two patients who developed bladder rupture following electroconvulsive therapy. In these patients, bladder rupture was attributed to powerful abdominal muscle contraction during an unmodified seizure on a distended bladder on a background of anticholinergic medication.

Figure 1. Cystogram showing Foley balloon in the peritoneal cavity with extravasation of contrast medium.

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References

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Increase of heat shock protein with exercise

Sir,

Dr Press and colleagues make a forceful case in their editorial for the beneficial effect of exercise in the prevention of coronary artery disease. We would however like to point out that there is a large body of literature on the role of heat shock protein (HSP) in providing cellular protection in a variety of stresses. Exercise induces HSP in skeletal muscle, and exercise training increases HSP in the skeletal muscle of old rats. A role for HSP in cardioprotection has been postulated, and several studies addressing the cytoprotective effect of HSP in experimental models of cardiac ischaemia have been summarized in a review by Benjamin and McMillan.

An approach to preventive measures is often difficult, as one is often trying to correct a risk that may not be perceived as imminent. Efforts to reduce cardiac risks by voluntary measures such as exercise often require a great deal of motivation, and the desired outcome (i.e. avoidance of a coronary event several years later), may not be completely appreciated by individuals. Additionally, physicians vary in their ability to emphasize the beneficial effects of exercise to their patients. This pattern of behavior is known as ‘clinical inertia’, and has been linked to poor control of hypertension and diabetes mellitus, despite awareness of evidence-based guidelines.

The editorial is highly significant in its efforts to compile and summarize a large body of evidence on the beneficial effects of physical exercise in the prevention of coronary artery disease, which could be applied to a majority of our patients.

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References


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