Hydrochlorothiazide induced hepato-cholestatic liver injury

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Abstract

Hydrochlorothiazide and other thiazide-like diuretics are considered as a first-line drug for initial therapy in uncomplicated arterial hypertension [1]. There are several reports [2–6] of thiazide-induced cholecystitis, but here we report a case of serious hepatotoxicity associated with hydrochlorothiazide treatment.

Keywords: hydrochlorothiazide, side-effects, liver injury, cholestasis

Case report

A 72-year-old woman consulted her general practitioner with recent onset of arterial hypertension. Treatment with hydrochlorothiazide (HCTZ) 25 mg daily was started. Previously, she had been in good health and not taking any herbal products or medication except for calcium carbonate 1200 mg daily. Periodically she had had routine clinical and laboratory evaluation.

Six days after starting the treatment she complained of anorexia, nausea, vomiting and pain in her right upper abdomen. Clinical examination revealed sensitivity to pain in the right upper quadrant of the abdomen. Liver function tests at this stage showed γ-glutamyltransaminase 6.05 µkat/L (reference range, 0–0.8 µkat/L), alanine aminotransferase 3.93 µkat/L (reference range, 0–0.67 µkat/L), aspartate aminotransferase 2.4 µkat/L (reference range, 0–0.67 µkat/L), alkaline phosphatase 2.43 µkat/L (reference range, 0.6–2.3 µkat/L). Previously, evaluation of liver function tests had been within the normal range. Serology for viral hepatitis (anti-hepatitis A, hepatitis B surface antigen, antibody to hepatitis B core and antibody to hepatitis C, Epstein–Barr and cytomegalovirus) and for autoimmune hepatitis (antinuclear antibody and anti-smooth muscle antibody) was all negative. Complete blood count, renal function test and liver ultrasound scan were also within the normal range. Symptomatic treatment with domperidone was unsuccessful. HCTZ-induced hepatocolestasis was thought likely and the drug was stopped. Three days after discontinuing HCTZ the patient improved clinically and liver enzymes returned to normal limits (Figure 1).

The Naranjo probability scale [7] indicates a possible relationship between ingestion of HCTZ and the development of reversible liver injury. The early development of the symptoms and the laboratory changes suggest a possible idiosyncratic reaction to the drug, rather than acute cholecystitis, which seems to be more associated with increasing duration of HCTZ use [2].

References

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Lesson of the week: perils of pessaries

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Abstract

Vaginal pessaries are widely considered to be a safe alternative to surgery in older women. We report a case of near fatal septicaemia in a 75-year-old woman associated with a shelf pessary, the presence of which was identified during an exploratory laparotomy. This case highlights the importance of the gynaecological history and examination when assessing older women with septicaemia of unknown source.

Keywords: vaginal pessary, older women, sepsis, adverse events, elderly

Case history

A 75-year-old woman was admitted from home with a 1-day history of lower abdominal pain, vomiting and not opening her bowels. Past medical history included ischaemic heart disease, cerebrovascular disease and asthma. The patient lived independently in the community.

On examination she was acutely confused and shocked with hypotension, tachycardia and poor urine output. She had a spiking pyrexia and abdominal distention with tenderness of the suprapubic and left iliac fossa areas. Urinalysis revealed a small amount of protein. Plain radiography showed no evidence of bowel obstruction or perforation. The patient was rehydrated intravenously and treated empirically with broad-spectrum antibiotics for a presumptive diagnosis of intra-abdominal sepsis.

Her condition deteriorated over the next 12 hours such that she required transfer to the intensive care unit for intubation and inotropic support. Computed tomography of the abdomen was normal and she underwent exploratory laparotomy 24 hours after admission. The pelvic tissues were found to be oedematous with copious turbid free fluid. A vaginal examination was performed in theatre and a pus-covered shelf pessary extracted. The vaginal tissues were markedly inflamed but there was no perforation. Blood, urine, pelvic fluid and pessary swabs all cultured the Gram-negative bacillus Proteus mirabilis.

The patient developed a number of medical problems post-operatively, including pulmonary embolus, cerebral infarct and pneumonia. Following intensive medical management and rehabilitation, she made an excellent recovery and was discharged home several months later.