

# ATYPICAL PRESENTATION IN THE ELDERLY – CASE REPORT OF AN ACUTE ABDOMEN

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## ABSTRACT

*An elderly woman with an acute abdomen due to a perforated peptic ulcer is discussed to illustrate the problem of atypical presentation of illness in the elderly. The importance of not dismissing non-specific symptoms and signs such as confusion, restlessness, abdominal distention and non-localising abdominal tenderness in the elderly, is highlighted. In addition, the useful radiological features of pneumoperitoneum are described. The need for functional assessment and rehabilitation are emphasised as important components in the practice of geriatric medicine.*

*Keywords: atypical presentation, elderly, fall, acute abdomen, pneumoperitoneum*

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## INTRODUCTION

A common geriatric problem is the atypical presentation of illness in the elderly patient. Being aware that atypical presentations like fall, confusion, incontinence and functional deterioration indicate some underlying disease process will alert the attending doctor to explore beyond vague symptoms and signs in the elderly so that early treatment can be instituted.

We report an elderly woman with an acute abdomen to illustrate this atypical presentation. The useful radiological signs and the approach in rehabilitating the patient are also briefly discussed.

## CASE HISTORY

The patient was a 77-year-old obese woman with a history of bilateral knee pain for many years on Synflex (Naproxen) prescribed by her general practitioner.

She was apparently well until a day prior to admission when she had fever. On the morning of admission, she had severe giddiness, weakness of her legs and fell. During the fall, she knocked her head and lost consciousness for about one minute. Ten minutes after the fall, she vomited and complained of left-sided chest tightness and breathlessness.

The patient was seen at the Accident and Emergency department within three hours of the fall. She was found to have fever of 38°C, tachycardia of 120/min, and blood pressure of 130/75 mmHg. No external injury was noted. There was pitting oedema of the ankles but no raised jugular venous pulse was seen. Scattered crackles were heard in the chest. The admitting doctor diagnosed congestive heart failure and a dose of 40mg frusemide was given.

In the ward, the patient was noted to be confused. She was tachypneic but no crackles or wheeze were heard in the chest. Mild tenderness was noted on the left side of the abdomen; per rectal examination was normal. Neurological examination did not reveal any focal deficit.

Initial investigations revealed the following: Hb 7.0 g/dl (MCV 74 fl), leucocyte count 16,100/mm<sup>3</sup> (86% polymorphs), platelet count 360,000/mm<sup>3</sup>; serum urea 72 mg/dl, sodium 128 mmol/l, potassium 3.1 mmol/l, chloride 88 mmol/l, creatinine 1.8 mg/dl, glucose 106 mg/dl; arterial blood gas on 24% oxygen ventimask showed pH of 7.546, pO<sub>2</sub> of 81.7 mmHg, pCO<sub>2</sub> of 30.2 mmHg, standard bicarbonate of 28.5 mmol/l and oxygen saturation of 97.2%; ECG showed sinus tachycardia; the supine chest radiograph did not show any obvious consolidation or pulmonary congestion; urinalysis was normal.

She was started on intravenous ampicillin for a probable chest infection and was transfused with 2 units of packed red cells. On the following day, she was still restless and complained of abdominal pain. The abdomen was distended but soft; there was mild tenderness but no obvious guarding or rebound tenderness, and bowel sounds were sluggish. The patient continued to complain of abdominal pain intermittently and repeat examination during the day revealed increasing abdominal distension and confusion. A provisional diagnosis of intestinal obstruction was made.

Abdominal X-rays revealed the presence of pneumoperitoneum and an urgent surgical consultation was obtained. At laparotomy, a perforated gastric ulcer at the greater curve of the stomach was found together with soiling of the peritoneal cavity by fibrin and pus. Peritoneal lavage and simple repair of the perforated ulcer with an omental patch was performed. The biopsy of the ulcer was negative for malignancy. Post-operatively, the patient made a slow recovery complicated by persistent fever. She was discharged 4 weeks later.

## DISCUSSION

This patient illustrates a number of interesting facets in the practice of geriatric medicine.

Falls are one of the "giants of geriatric medicine" as described by Bernard Isaacs<sup>(1)</sup>. Apart from accidents, falls often indicate an underlying disease process or functional disability. In 10% of the falls, it may be the only presenting symptom of an acute illness<sup>(2)</sup>. It is not enough just to exclude injury following a fall; more importantly, the reason for the fall should be adequately explained and treated before discharging the patient. In the absence of residual neurological deficit, an acute haemodynamic disturbance due to a perforated peptic ulcer would seem to be

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the most likely cause of the fall in our patient. In retrospect, the finding of anaemia and azotaemia would be consistent with acute gastrointestinal bleeding.

The patient had another common geriatric syndrome, that of confusion. It is essential to distinguish acute confusion (delirium) from dementia. Elderly patients, however old, should not be labelled as being "senile" or having dementia, just because they cannot give a coherent or good history. Diagnosing dementia has serious implications: it often distracts the doctor from searching for reversible causes of confusion, thus leading to delay in treatment which can be detrimental<sup>(3)</sup>.

In acute confusion, the onset of mental change is fairly sudden and duration is short. Clouding of consciousness and restlessness is common. Disorientation to time, place and person, and difficulty in recalling both past and recent events are present. The common causes of acute confusion in geriatric practice such as drugs, infections, heart failure, metabolic disorders and intracranial lesions should be actively searched for and corrected<sup>(4)</sup>.

Vague, nonspecific abdominal complaints in the presence of a serious intra-abdominal pathology is not unusual in the elderly. Severe pain, guarding and rigidity which are synonymous with perforated viscus in the younger patient may often be absent in the elderly. The need for repeated evaluation in an acutely confused patient is exemplified in our patient. It would have been disastrous if sedatives, which are commonly used to calm restless patients, had been given without reassessment.

The atypical presentation of perforated peptic ulcer in the elderly is well recognised in geriatric practice<sup>(5)</sup>. Instead of excruciating pain, the picture is often more subdued and prolonged. The absence of a past history of peptic ulcer also tends to reduce suspicion of the disease. Localisation can be quite deceptive during the abdominal examination and leucocytosis may be absent in a third of patients.

Fortunately, helpful radiological signs were present in the supine film of this patient which were diagnostic of pneumoperitoneum: the "double-wall" sign (arrow 1), the "lucent liver" sign (arrow 2) and the "football" sign (arrow 3) (Fig 1). Free perforation of a peptic ulcer is the most frequent cause of pneumoperitoneum with peritonitis<sup>(6)</sup>.

Although most doctors are trained to look for "air under the diaphragm", this may be difficult to detect in those who are too ill to sit up for the X-ray film. In the supine X-ray film, relatively small amounts of free intraperitoneal air are visualised as lucencies over the position of the liver varying from streaks or bubbles to a homogenous appearance<sup>(7)</sup>. This "lucent liver" sign provides easy and early identification of pneumoperitoneum. When large amount of free intraperitoneal air is present, accumulation occurs in the uppermost portion of the peritoneal cavity in the supine position. This produces a generalised greater-than-normal radiolucency of the entire abdomen and often assumes an oval configuration ("football" sign)<sup>(8)</sup>. The "double wall" sign is the result of large collection of air between the intestinal loops providing a contrast of air for the outer walls of the intestines to be visualised. This is often the only sign of pneumoperitoneum in very sick patients who are unable to sit or turn<sup>(6)</sup> although pitfalls in its interpretation have been documented<sup>(9)</sup>.

The post-operative period of our patient was stormy and the intra-abdominal sepsis took 3 weeks to settle. Although the patient was deemed surgically fit for discharge, she was retained a week longer for the purpose of rehabilitation. This is another important aspect of geriatric practice.

It is crucial to ensure that the full potential of a patient's capacity to function independently following an acute illness is

**Fig 1 – Supine abdominal X-ray of patient showing "double-wall" sign (arrow 1), "lucent liver" sign (arrow 2) and "football" sign (arrow 3).**



achieved through adequate rehabilitation to prevent chronic disability and its attendant physical and psychosocial problems. Good medical practice, besides treating the illness, should encompass rehabilitating patients to return to their pre-morbid state of independent lifestyle, if possible.

It is therefore important to document the pre-morbid functional and mental state of any elderly patient. Various indices of measurement are available and the most basic functional assessment would include the patient's capability in the following areas: bathing, dressing, getting to toilet, transferring, remaining continent and feeding<sup>(10)</sup>. For most elderly individuals during an acute illness, these six functions will often be lost in the order listed and during recovery, be regained in the reverse order. This can be used as a simple gauge to the patient's improvement and the extent of rehabilitation necessary.

## CONCLUSION

Being aware that the elderly are more likely to have atypical presentations in their illnesses will alert doctors not to dismiss vague and non-specific complaints as simply due to ageing<sup>(11)</sup>. Almost certainly, an acute deterioration in the mental or functional status is a strong indication of an underlying disease process.

Medical, mental, social as well as functional assessments are needed to plan the holistic management of elderly patients. These four elements should be assessed in all elderly patients who come for medical attention.

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