Upper and lower gastrointestinal endoscopical investigation in elderly patients with iron deficiency anaemia

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Abstract—Iron deficiency anaemia is frequently observed in male adults and postmenopausal women due to chronic occult bleeding, usually from the gastrointestinal tract. Practically, as endoscopical investigation of the gastrointestinal system is an invasive procedure, iron replacement treatment was generally started without investigation of the underlying aetiology even in first-line health institutions. This study evaluates the role of endoscopy in the investigation of the aetiology of anaemia in 95 patients (51 males, 44 females), aged 64.9 ± 12.5 years (range 50–90 years). All patients having iron deficiency anaemia were investigated by upper gastrointestinal endoscopy and colonoscopy. Upper and lower gastrointestinal pathologies were seen in 10 (10.6%) and 55 (57.8%) patients, respectively. However, no gastrointestinal lesion was found in 30 (31.6%) patients with iron deficiency anaemia. Out of the 95 patients, 16 (16.9%) had erosive gastritis, 15 (15.8%) duodenal ulcer, 8 (8.4%) gastric ulcer, 7 (7.3%) gastric tumours, 7 (7.3%) oesophagitis, 5 (5.4%) colon tumours, 3 (3.2%) haemorrhoids, 2 (2.1%) non-tropical sprue, 1 (1%) colonic polyp, and 1 (1%) colitis. In the majority of elderly patients with iron deficiency anaemia, upper gastrointestinal system disease was found. In 12 (12.7%) patients in the study group, malignancies were detected. In elderly patients with iron deficiency anaemia, the aetiology should be highlighted before giving iron supplementation.

Key words: Iron deficiency anaemia; aetiology; gastrointestinal system; endoscopy.

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INTRODUCTION

Iron deficiency anaemia (IDA) is usually considered to be a sign of an underlying disease, especially in elderly patients [1]. In male adults and postmenopausal women, oesophagitis, gastritis, peptic ulcer, arteriovenous malformations, ulcerative lesions due to inflammation, and malignancy may induce chronic blood loss and cause IDA [2]. As gastrointestinal malignancy in the adult population may manifest itself by IDA, endoscopical examination of these patients should be performed [2–4]. Investigation of the gastrointestinal system by endoscopical examination may help in both the early diagnosis of malignancy and the prompt and specific treatment of the underlying disease [3, 4]. Endoscopical investigations were reported to have both high sensitivity and specificity [2]. However, iron replacement therapy is frequently started in IDA with unknown aetiology. In this study, we evaluated the gastrointestinal endoscopical examination findings in elderly patients with IDA.

PATIENTS AND METHODS

95 patients (51 males, 44 females) aged 64.9 ± 12.5 years (range 50–90 years) were included in the study. Their past history revealed that 54% of the patients had gastrointestinal complaints. In 45% there was non-steroidal anti-inflammatory drug (NSAID) usage, 53% were smokers, and 10% alcohol abuse. Nearly half of the patients (43%) were treated with iron replacement therapy prior to the study. Haemoglobin, haematocrit, mean corpuscular volume, serum iron, transferrin saturation, and ferritin levels were measured and blood smear examinations were done from all of the patients. Diagnosis of anaemia is based on WHO criteria, with a haemoglobin value of less than 13 g/dl in men and less than 12 g/dl in women, and a haematocrit value of less than 39% in men and less than 0.36% in women. Diagnosis of iron deficiency is based on a serum iron value of less than 49 μg/dl in men and women, a serum ferritin value of less than 18 ng/ml in men and less than 9 ng/ml in women, and transferrin saturation less than 15% in men and women [1].

Exclusion criteria from the study were the presence of haemoglobinopathy, enzyme and membrane defects, other haematological diseases, renal diseases, collagen vascular diseases, partial gastrectomy, and gynaecological bleeding. Anaemic patients whose underlying disease was diagnosed by radiography, angiography, and scintigraphy were also excluded.

Fecal occult blood test screening was done in 62 (63%) patients and parasitological screening was applied to all patients. Afterwards, upper gastrointestinal endoscopical and colonoscopic investigations were performed and biopsies of the lesions were examined.