

JS NAYAGAM, SM HA, L BARRETO, A ZANG, H CURTIS

DEPARTMENT OF GASTROENTEROLOGY, PRINCESS ROYAL UNIVERSITY HOSPITAL, KING'S COLLEGE HOSPITAL NHS FOUNDATION TRUST, UNITED KINGDOM
DEPARTMENT OF UROLOGY, PRINCESS ROYAL UNIVERSITY HOSPITAL, KING'S COLLEGE HOSPITAL NHS FOUNDATION TRUST, UNITED KINGDOM

INTRODUCTION

The British Society of Gastroenterology (BSG) guidelines for the management of iron deficiency anaemia (IDA) published in 2011, recommends:

- "urine testing for blood is important in the examination of patients with IDA"
- "~1% of patients with IDA will have renal tract malignancy"
- "further renal tract evaluation with ultrasound is recommended if haematuria is found"

Data on IDA in patients with RCC however suggests that haematuria is rarely detected in these patients, and is secondary to iron deposition or consumption within the tumour, as opposed to occult renal tract blood loss.

OBJECTIVES

We sought to:

- identify the prevalence of IDA in patients with RCC
- evaluate the frequency of haematuria in this subgroup of patients

METHOD

All patients newly diagnosed RCC at a single NHS Trust over a 3 year period (1/1/13-31/12/15) were identified from a prospective database of the Urology multidisciplinary meeting (MDM).

A retrospective analysis of electronic notes, MDM outcomes, clinic letters, laboratory results, radiology reports, endoscopy reports and histology was undertaken. Information on demographics, symptoms and investigation results were collected. IDA was defined by a combination of microcytosis, hypochromia and low ferritin at time of clinical review, or a diagnosis of IDA on enteral iron replacement prior to clinical review.

Contact Information
shanika.nayagam@doctors.org.uk

RESULTS

Demographics

- 163 cases of RCC in 162 patients
- Mean age 63.7 years
- 35% female

Anaemia

43 patients (26.4%) were anaemic at diagnosis. IDA was present in 22 patients (13.5%), the rest had no evidence to support iron deficiency (table 1).

59% of IDA patients had previously undergone gastrointestinal (GI) endoscopy (summarised in table 2): one colonic melanoma had been diagnosed; all others were normal or benign. Historic bloods were not available for all patients, but in 4 IDA was chronic (2.5 to 12 years prior to diagnosis of IDA) without a GI cause identified.

	IDA	Anaemia (non-IDA)
Number (% total)	22 (13.5%)	21 (12.9%)
Mean age (years)	66	69.3
Female (%)	63.6%	33.3%
Median haemoglobin (g/L)	93.5	108.0
Median mean corpuscular volume (fL)	77.9	92.7
Haematuria	3 (13.6%)	7 (33.3%)

Table 1: demographics, haematological indices and haematuria in patients with anaemia

Haematuria

Haematuria (visible and non-visible) was reported in 22.1% (36) of all RCC patients, the majority of which was visible haematuria (32 patients, 88.9%).

13.6% of those with IDA (3 patients) had haematuria. Of these 3 patients, 2 had visible haematuria and 1 had non-visible haematuria.

Gastroscopy findings	n = 12
Normal	4 (33%)
Abnormal	8 (67%)
Reflux oesophagitis	3
Candida oesophagitis	1
Barrett's oesophagus	1
Hiatus hernia	2
Gastritis	2
Colonoscopy findings	n = 10
Normal	6 (60%)
Abnormal	4 (40%)
Colonic melanoma	1
Colonic polyp	2
Diverticulosis	2

Table 2: summary of endoscopic findings in patients with IDA.

Symptoms & Findings

The symptoms and clinical findings which triggered further investigation of patients with IDA are summarised in table 3. The most common reason for obtaining imaging was weight loss (50%), followed by the detection of IDA (36.4%).

Symptom/finding	
Weight loss	11 (50%)
IDA	8 (36.4%)
Haematuria	3 (13.6%)
Abdominal pain	3 (13.6%)
Abdominal mass	2 (9.1%)
Incidental finding	2 (9.1%)
Infected renal cyst	1 (4.5%)
Cyst surveillance	1 (4.5%)

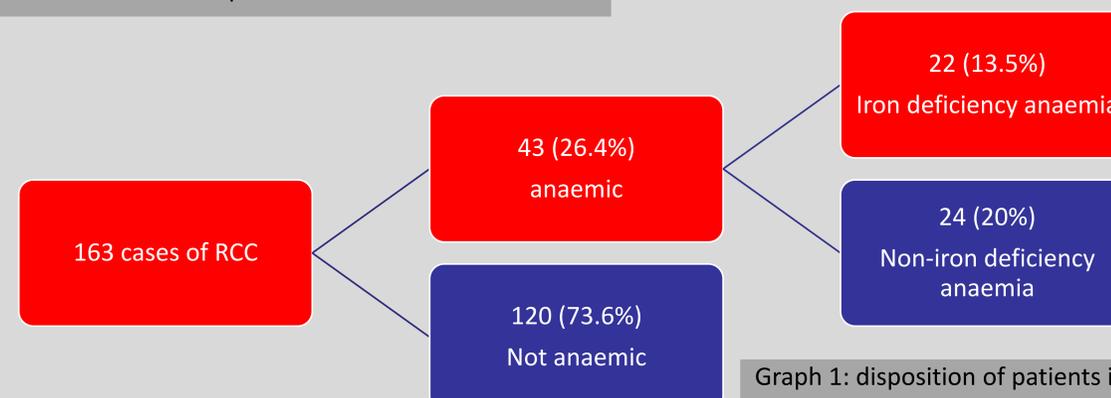
Table 3: summary of symptoms in patients with IDA which triggered further investigation and eventual diagnosis of RCC

DISCUSSION

Anaemia is commonly found in patients diagnosed with RCC at presentation. In our study group approximately half of anaemic patients were iron deficient. The majority of these had been previously investigated with GI endoscopy without a significant GI cause identified.

Haematuria was not reported in most patients with IDA suggesting urinalysis may not be a suitable screening investigation. This adds further weight to the hypothesis that IDA associated with RCC is not from occult renal tract blood loss but from deposition in, or consumption by, the tumour itself.

We propose that renal tract ultrasound is considered in all patients with IDA without significant GI pathology.



Graph 1: disposition of patients included