Dieulafoy lesion presenting as severe anaemia in a soldier

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ABSTRACT

An unusual presentation of severe anaemia in a young soldier is presented. A brief review of the nature of Dieulafoy lesions and treatment and difficulties of managing these in military primary care is considered.

INTRODUCTION

Paul Georges Dieulafoy, Professor of Pathology at the Faculty of Medicine in Paris (1839–1911), first described this rare but serious cause of gastrointestinal (GI) bleeding in 1891. This predominantly GI lesion is characterised by a very small area of ulceration with an arteriole at its base, with otherwise normal GI mucosa surrounding the site.¹ In non-eponymous terminology, it has been referred to as a calibre-persistent artery or aneurysm. Mortality from this condition has improved in the intervening century from 80% to 8% as has its recognition. Previously only treatable through surgery, the advent of endoscopy has improved treatment and outcomes.² This condition is commoner in men (2:1) and in older age groups (50–70), but is still an important cause of upper GI bleeding in younger patients in whom it was originally described, accounting for up to 6% of this type of haemorrhage in the under 18 age group.³ Although over half will present with some symptoms of GI bleeding,⁴ the original lesion was described as ‘silencieusement et sournoisement’ (silently and slyly).¹ In the military setting, such an occult presentation in the case we report can have serious consequences and reminds us of the dangers of bedding down unwell soldiers in single living accommodation (SLA).

CASE REPORT

An 18-year-old Infantry soldier presented at early morning clinic on the first day of his illness because of frequent vomiting over the last 12 h; his vomit was ‘watery and slightly yellow’. He was normotensive and afebrile with a resting pulse of 91. He was advised to continue oral fluids, to return in 24 h if he was still unwell and was ‘bedded down’ (excused all duties and confined to a defined area) in the SLA.

He returned in 24 h still feeling too unwell to report for duties and described vomiting several more times and feeling weak, though he was now able to eat and drink small amounts. He admitted to feeling dizzy on standing and thirsty. He was pale and appeared anxious but the rest of his physical examination was normal other than dry lips. He remained normotensive, afebrile and with a pulse of 91. He was given a litre of intravenous 0.9% NaCl over 2 h and then reassessed. He no longer felt lightheaded and a tentative diagnosis of

dehydration secondary to acute gastritis was made. The patient was reluctant to be admitted to hospital. After careful liaison with his Unit, it was decided to ‘bed him down’ for a further 24 h and arrangements were made with his unit to ensure he was looked after. The patient was instructed to return if he still felt unwell in 24 h.

His next presentation to medical care was on the 6th day following initial presentation when a friend, who had called in to the patient’s SLA room to see how he was, telephoned the duty nurse to ask for a review as the patient could no longer get out of bed. The patient was brought to the emergency treatment bay by ambulance and assessed by the Duty Medical Officer. The patient was now short of breath on minimal exertion and could not tolerate sitting up. He described feeling extremely cold and weak. He denied any diarrhoea or black stools and had no abdominal pain. He had not vomited any more. He had no past medical history of note and had until this point been fit and well. His blood pressure was 120/32 with a pulse of 123 beats/min. He had an extreme central pallor and an ejection systolic murmur; JuguloVenous Pressure was assessed as normal. He had extremely pale skin, no capillary refill and a soft non-tender abdomen—digital rectal examination revealed an empty rectum with no evidence of melaena. A diagnosis of severe and profound anaemia of unknown cause was made; he was cannulated and a slow crystalloid intravenous infusion commenced while arrangements were made to admit to hospital as an emergency.

Soon after admission, his haemoglobin was measured as 3.0 g/dl with a haematocrit of 10% and he was transfused six units of packed red cells over 12 h. Gastroscopy the following morning showed an empty stomach with no signs of bleeding and appeared normal. A 4 mm postpyloric ulcer was noted in the duodenal bulb with a central visible vessel on the anterior wall that was not actively bleeding. The base of this lesion was injected with 4 ml of adrenaline. The campylobacter-like organism test was negative. A diagnosis of a Dieulafoy ulcer was made.

He remained an inpatient for a week and on days 8–10 passed large amounts of melaena stool though remained well. On day 12 he passed a normal stool and was discharged on a proton pump inhibitor and iron supplements. His haemoglobin on day of discharge was 8.2 g/dl. He was given light duties and reported regularly to the medical centre. After 6 weeks, he had made a full recovery without any sign of rebleeding. Further endoscopy is not planned in the absence of any further symptoms.

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DISCUSSION

When Professor Dieulafoy first described his 'exulcretio simplex' lesion in 1898, it was described from pathology specimens from a series of paediatric cases of acute fatal haematemesis. In current practice, the lesions are more commonly seen in older patients with up to 50% being on anticoagulants or non-steroidal anti-inflammatory drugs therapy and as many as 90% having comorbidities. The trigger for bleeding from the lesion is not understood; the observation that it often seems to occur after a degree of physiological stress (a large proportion of cases being already hospitalised for other causes) has gained some ascendancy.² Although mortality following bleeding from a Dieulafoy lesion was historically reported as high as 80%, the advent of fibre-optic endoscopy as a means of diagnosis and treatment has improved this to 8%. Nonetheless, it remains a serious condition by nature of the lack of preceding symptoms and absence of pain.

The lesion, which is characterised by a small ulceration in otherwise healthy mucosa containing a single large arteriole, is found throughout the GI tract though it predominates in the stomach (80%); it is less commonly (20%) found in the duodenum and rarely in the lower GI tract including the rectum. The gastric lesions will often present with small haematemeses in the 24 h prior to massive episodes;⁴ however, lower lesions will have no other preceding symptoms other than nausea and symptoms of increasingly worsening anaemia.

Treatment beyond initial resuscitation is by endoscopy and injection of the base of the lesion. The risk of rebleeding following injection therapy with adrenaline alone is reported to be between 17% and 50%,⁵ which has led to other forms of primary treatment being evaluated including injections with adrenaline and argon plasma coagulation⁵ and also endoscopic band ligation,⁶ both of which appear to lead to much lower instances of rebleeding than with injection of adrenaline alone.

The case described was close to the original description with an occult presentation and little in the way of symptoms of upper GI bleeding. Though possibly only accounting for 6% of upper GI bleeds, it is possible that it is rarely identified rather than rare. This is due to the small size of the lesion and the large amounts of blood often found in the gastric lumen.

The presentation in this case appeared initially to be a severe gastroenteritis which is a relatively common presentation in military primary care. Cases of gastroenteritis in these circumstances can be admitted to a low dependency ward attached to the medical facility to separate the patient from the rest of the unit and allow clinically supervised recovery. Unfortunately,

such a facility does not exist at all medical centres including ours.

Official Defence Medical Services policy on bedding down is that it should not be undertaken in the single soldier's accommodation. However, in overseas settings duty medical officers in medical units without bedding down facilities have a difficult clinical decision to make. Admission to a distant host nation hospital is often strongly resisted by the patient and the chain of command and is clinically excessive in cases of simple gastroenteritis especially, as in this instance, when the SLA is very close to the medical centre.

The original arrangements put in place by his Unit on second day had ceased by the fourth day, illustrating the fragility of such arrangements. The patient who was too unwell to summon help for himself became progressively more anaemic and help was only summoned by a chance finding by the patient's friend.

CONCLUSIONS

This case underlines the difficulties of caring for unwell single soldiers without bedding down facilities being available. Common things do occur commonly but occasionally rarer conditions will masquerade with common presentations. The challenge in primary care is to distinguish them.

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Contributors Both doctors contributed to the authorship of the article. RMWB is responsible for the overall content.

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