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Prevalence of gastric and duodenal ulcers at endoscopy in Nigerian and British patients

A.O. MALU[1] and G.M. SOBALA[2]
[1]*Jos University Teaching Hospital, Jos, Nigeria and* [2]*Academic Unit of Medicine, St. James University Hospital, Leeds L S9 7TF, UK.*

Summary

We compared endoscopic findings in 243 Nigerian and 1867 British patients undergoing endoscopy for similar indications. The Nigerian patients were much younger, 46.5% of them being less than 35 years old whereas the British patients were older, with only 36.2% being less than 35 years old (P=0.001). Duodenal ulcers were commoner in the Nigerian patients (P=0.03) and gastric ulcers were also commoner in the Nigerian patients who were less than 35 years old (P=0.01). There was no difference in the prevalence of gastric nor oesophageal carcinoma in the two groups.

Résumé

Sont comparées les découvertes endoscopiques de 243 patients Nigérians et de 1867 patients Britanniques qui subissaient l'endoscopie pour les mêmes raisons. Les patients Nigérians étaient plus jeunes dont 46.5% sont âgés de moins de 35 ans alors que les patients britanniques l'étaient plus âgés dont 36.2% avaient moins de 35 ans (P = 0.001). L'ulcère duodénal est plus fréquent chez, les Nigérians (soit P = 0.03); l'ulcère simple de l'estomac est plus fréquent chez les patients Nigérians âgésde moins de 35 ans (P = 0.01). Aucune différence, n'est notée concernant la prévalence du carcinome gastrique ou du carcinome oesophagien ou du carcinome oeosophagien chez les deux groupes.

Introduction

It has been traditionally believed that parts of black Africa that are in the savannah have a low prevalence of gastro-duodenal diseases (GDD) [1,2]. This belief is based mainly on anecdotal observations of doctors working in rural mission hospitals who noticed the paucity of symptoms of peptic ulcer disease (PUD) and low prevalence of its complications. Systematic study was very limited and consisted mainly of single contrast barium meal studies by non radiologists. More recent observations do not all support this belief, since some show these same areas to have a high prevalence of GDD[3,4] though others still claim that these areas have truly a low prevalence of the gastro- duodenal diseases[5].

With the realisation that *H. pylori* plays a key role in causation of GDD[6-8] and that its prevalence is higher in Africa than in the western countries[9], one wonders why the prevalence of the diseases associated with *H. pylori* should be lower where its prevalence is highest. Comparative studies are needed to determine whether there is such a difference in the prevalence of GDD in the two societies. In this study we have compared endoscopic finding in 243 patients from the Jos University Teaching Hospital, Jos, in central Nigeria with the findings in 1867 patients from the teaching hospital in Leeds in the United Kingdom.

Patients and methods

Endoscopic findings in two hundred and forty-three consecutive Nigerian patients from the Jos University Teaching Hospital, Nigeria who were endoscoped by one of us (AOM) for dyspepsia, GI blood loss or on suspicion of GI neoplasm were compared with 1867 from the Leeds General Infirmary who were all endoscoped by one of us (GMS) for similar indications. The Chi squared test was used in the comparison and a difference of < 0.05 was taken as significant.

Results

Table 1: Endoscopic findings in British and Nigerian patients

Disease & age group		Leeds, UK	Jos, Nigeria	Significance
DU	< 35	74/675 (11.0%)	20/113 (17.7%)	P=0.04
	> 35	156/1192 (13.1%)	22/130 (16.9%)	p=0.20
	Total	230/1867 (12.3%)	42/243 (17.3%)	p=0.03
GU	< 35	7/675 (1%)	5/113 (4.4%)	P=0.01
	> 35	82/1192 (6.9%)	7/130 (5.4%)	p=0.51
	Total	89/1867 (4.8%)	12/243 (4.9%)	P=0.90
G Ca	< 35	0/675 (0%)	0/113 (0%)	
	> 35	18/1192 (1.5%)	3/130 (2.3%)	P=0.49
	Total	18/1867 (1.0%)	3/243 (1.2%)	p=0.69
O Ca	< 35	0.675 (0%)	0/113 (0%)	
	> 35	8/1192 (0.7%)	3/130 (2.3%)	P=0.051
	Total	8/1867 (0.4%)	3/243 (1.2%)	P=0.10

Table 1 shows the Nigerian and the British patients divided into those below and above 35 years old. The percentage of the Nigerian and British patients below 35 was significantly different (P=0.001) at 46.5 and 36.2 per cent respectively. Duodenal ulcers were found much more commonly in the Nigerian patients (P=0.03). Gastric ulcers were also more common among the young Nigerians (less than 35 years old) than among the UK patients of similar age (P=0.01). The prevalence of gastric and oesophageal carcinoma was about the same in the two populations even though the Nigerian patients were much younger.

Discussion

Our findings do not support the generally accepted view that GDDs are less common in the savannah regions of West Africa, compared with Europe[1,5]. There are a number of possible explanations for the difference between ours and other similar findings [4,10] on the one hand and what has been generally accepted[1,2]. More accurate diagnostic methods are being used, and these have become more accessible to a greater number of patients. It is possible that the previous methods of investigations which concentrated on complications of peptic ulcer disease or on the use of single contrast radiology by non-radiologists grossly underestimated the prevalence of GDDs in Africa. It is common knowledge that even double-contrast radiology by radiologists is less accurate than endoscopic methods in the diagnosis of PUD. Likewise symptoms are an unreliable method of diagnosis. Many patients with PUD in these communities do not come to hospital till they develop complications. Ofili[4] working in the same area of Nigeria found that of 26 patients with gastric outlet obstruction, only one had sought medical help for his PUD before the development of obstruction.

Previous studies did suggest that PUD prevalence was increasing in many parts of Africa[11,12] and that this increase was higher in the cities than in the immediate surrounding rural areas. It is possible that this 'increase' was due to the increasing utilisation of modern medical facilities by the city dwellers. One might even speculate that *H. pylori* is relatively new to Africa and that it was introduced from the outside. As the social conditions in Europe have continued to improve so the prevalence of PUD has continued to fall since the prevalence of *H. pylori* infection has declined[13]. On the other hand in Africa, the prevalence of infection has continued to rise, being highest initially among the city dwellers who not only had first contact with the infection but also lived in crowded housing compared to their counterparts in the villages. We realise that the sample size in the two groups is different, but this does not negate the finding that though the Nigerian patients are much younger, they do not have a lower prevalence of GDD. We need even larger comparative studies to reassess the belief that there is a significantly lower

prevalence of GDD in black Africans as compared to Caucasians.

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