Association of Upper Gastrointestinal Lesions with Addictions

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Abstract

The association of upper gastrointestinal (G.I.) lesions with various addictions was studied in 383 consecutive patients endoscoped over a year. Of the total, 179(47%) had no addictions and 204 (53%) were addicted to either cigarette smoking (70%), tobacco chewing with pan (23%), pan alone (5%) or alcohol (2%). Overall, 78% cases with and 59% without addictions had an upper G.I. lesion on ertdosoopy (P<0.001). Duodenal ulcer was commonest lesion In all types of addiction (JPMA 43: 176, 1993).

Introduction

Inter-regional variations have been observed in the pattern of addiction. Tobacco and alcohol consumption are the most popular addictions, world over. Being a muslim country, alcohol consumption is prohibited in Pakistan; but tobacco use either as smoking or chewing Is the most predominant addiction reported[1]. Tobacco is chewed either as niswar (unrefined tobacco mixed with lime) or with pan (betel leaf with catechu, lime and areca nut). The hazardous effect of smoking on different systems has long been described[2], especially its association with peptic ulcer is well established[3-5]. However, the effect of commonly prevalent addictions S the upper G.I. mucosa in our patients is lacking. The present study was done to define the association of various addictions with the gastrointestinal lesions, in patients undergoing upper G.I. endoscopy.

Patients and Methods

All patients above the age of 18 years, undergoing upper G.L endoscopy for various reasons between January to December, 1990 were included in the study. Patients with cirrhosis, idiopathic portal hypertension and chronic renal failure were excluded. A detailed. history of addictions was taken from each patient which included age at onset of addiction, type of tobacco used and average daily consumption. Endoscopy was done using XQ1O GIF Olympus endoscope after topical anaesthesia and findings were recorded on a proforma. An ulcer was defined as a mucosal break of atleast 5mm or more In cases of growth atleast five biopsies were taken from different sites and later subjected to histopathology for confirmation. The patients were divided into five groups, i.e., smokers, pan chewers, pan with tobacco chewers/tobacco chewers, alcohol users and those having no addictions. Patients with history of less than 6 months of refraining from addictions were included in the current users. Statistical analysis was done using x2 test. To evaluate whether the extent of addiction had any effect on mucosal lesions, the smokers and pan with tobacco chewers were divided into light (_ 10 cigarettes or S 5 pans per day) or heavy (>10 cigarettes or >5 pans per day) smokers and pan with tobacco chewers respectively. This division was done as the multiple of five cigarettes or pan with tobacco closest to the median consumption of 10 cigarettes and Spans with tobacco per day.

Results

Three hundred eighty-three patients (262 males and 121 females) were finally included in the study; their ages ranged from 19-95 years with majority falling in the 4th decade. Of the total, 204 (53%) had one or more addictions and 179 (47%) no addictions (Table I).

Table I. Pattern of addictions in patients undergoing upper G.I. endoscopy.

	Male	Female	Total	(%)
Smokers	139	3	142	(70)
Pan	4	6	10	(5)
Tobacco and pan with tobacco	26	22	48	(23)
Alcohol addiction	4	0	4	(2)
Total	173	31	204	
No addiction	89	90	179	

Smokers were predominantly males 98% (139 out of 142) while pan and tobacco chewing was equally prevalent in both sexes. Endoscopically 78% (157) of those with addiction and 59% (105) without addiction had a lesion ($P<0.001$), When the mucosal lesions were plotted against the addiction pattern, duodenal ulcer was the most common lesion in all groups with and without addiction (Table II),

Table II. Mucosal lesions in those with and without addiction.

	Smoking		Pan	Pan and tobacco		Alcohol	No addiction	
	Nos	(%)		Nos.	(%)		Nos.	(%)
Oesophagitis	9	(7.6)	1	4	(14)	1	14	(13)
Gastritis	16	(13.5)	1	5	(18)	1	16	(15)
Duodenitis	9	(7.6)	1	1	(3.6)	1	5	(4.8)
Oesophageal ulcer	3	(2.5)	-	-	-	-	1	(0.9)
Gastric ulcer	-	-	-	-	-	-	2	(2)
Duodenal ulcer	52	(44)	1	6	(21.4)	-	31	(30)
Oesophageal Ca	17	(14.4)	2	5	(18)	1	7	(6.6)
Gastric Ca	5	(4.2)	-	2	(7)	-	3	(2.9)
Others	7	(6)	1	5	(18)	-	26	(24.8)
Normal	24	(16.9)	3	20	-	-	74	(41.3)
Total	142	10	48	-		4	179	

but its frequency was significantly higher ($P< 0.05$) In smokers as compared to those without addiction. Overall frequency of duodenal lesions was more in males irrespective of habits as compared to females (N.S.) (Table III).

Table III. Distribution of mucosal lesions in both sexes according to addictions.

	Smokers		Pan	Alcohol	Pan and tobacco		No addiction		Total
	Nos.	(%)			Nos.	(%)	Nos.	(%)	
Male									
Ca oesophagus	15	(10.8)	-	1	3	(11)	3	(3.4)	22
Ca stomach	4	(3)	-	-	1	(3.7)	2	(2.2)	7
Oesop. lesions	19	(13.7)	1	1	5	(18.5)	19	(21.3)	45
Gastric lesions	16	(11.6)	1	1	1	(3.7)	7	(8)	26
Duodenal lesions	60	(43.4)	2	1	7	(26)	29	(32.5)	99
Normal	24	(17.3)	-	-	10	(37)	29	(32.6)	63
Total	138	4	4	27	-	89	-	262	
Female									
Ca oesophagus	2	(33.3)	2	29	3	(9)	4	(4.4)	10
Ca stomach	1	(33.3)	-	-	1	(3)	1	(1.1)	3
Oesophageal lesions	-	-	1	14.3	4	(12)	21	(23.3)	26
Gastric lesions	-	-	-	-	4	(12)	11	(12.2)	15
Duodenal lesions	1	(33.3)	-	-	-	-	7	(7.7)	8
Normal	-	-	3	43	10	(30)	45	(51.1)	59
Total	4	-	6	-	22	-	89	-	121

Other differences in various groups were minor. Carcinoma of the oesophagus was commonest in pan and tobacco chewers (18%) and smokers (14.4%) (Table II). Except for the oesophageal and gastric carcinoma, there was no difference in the frequency of lesions and the extent of addiction in various groups (Table IV).

Table IV. Comparison of mucosal lesions, patients without addiction vs light and heavy smokers and pan with tobacco chewers.

	Smoking				Tobacco chewing				No addiction	
	<10	(%)	>10	(%)	<5	(%)	>5	(%)	Nos.	(%)
Ca oesophagus	4	(5.8)	13	(17.5)	3	(10)	3	(16)	7	(4)
Ca stomach	-	-	5	(6.8)	2	(6)	-	-	3	(1.7)
Oesophageal lesions	8	(11.6)	11	(11.9)	6	(20)	3	(16)	40	22.3)
Gastric lesions	10	(14.5)	6	(8.1)	3	(10)	2	(10)	18	(10)
Duodenal lesions	29	(42)	32	(43.2)	5	(17)	2	(10)	36	(20)
Normal	18	(26)	8	(11.8)	11	(37)	9	(47)	75	(42)
Total	69	-	74	-	30	-	19	-	179	

Discussion

In Pakistan, smoking is predominantly a male addiction whereas pan and tobacco chewing is equally prevalent in both sexes and alcohol is rarely consumed[1]. Similar pattern was observed in this study. Overall endoscopic lesions were more common in patients with addiction (78%) as compared to those without addiction (59%). (Pc 0.001). Similar observation was found in earlier studies when smokers

were compared with non-smokers[6]. Addictions had no effect on superficial mucosal lesions. Duodenal ulcer was commonestin all groups but more so in smokers (Pc 0.05), supporting the ulcerogenic role of tobacco on duodenal mucosa. Only two patients in this study had gastric ulcer and both had no addictions. Oesophageal and gastric malignancies are more common in smokers[6], as 14% of smokers and 18% pan with tobacco chewers in this study had upper gastrointestinal malignancy (Table III). There is a dose response effect between the number of cigarettes smoked and the ulcerative lesions[7-9] but such an association was not found with small number of patients in these groups, it is difficult to thaw any inference. The present study has demonstrated S increased risk of upper G.I. lesions in those having any addiction. Smokers are more likely to develop duodenal ulcer as compared to non-smokers, similarly pan tobacco chewing may increase the chances of developing carcinoma.

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