Pathological correlates of gastric carcinoma

Gastric carcinoma is a common malignancy in India and is one of the leading causes of morbidity and mortality. We retrospectively analyzed the data of 75 confirmed cases of gastric carcinoma, seen at our department between January 1990 and July 1995. Twenty-seven of these cases were resected gastrectomy specimens.

The most common site of involvement was the pylorus (n=27), followed by the cardia (14), body (13), lesser curvature (10) and greater curvature (5). Three cases had more than one site involved. The whole stomach was involved in 3 cases. Grossly, nearly 45% of all cases (n=34) were of the ulcerated variety, followed by fungating (18), polypoid (13), diffuse (7) and superficial (3) types. The most common microscopic type was the diffuse variant (n=35).

Microscopic changes in adjacent mucosa were studied in the resected gastrectomy specimens. Chronic gastritis was present in all the cases. Atrophic gastritis and intestinal metaplasia were seen in 20 and 15 cases, respectively. The distribution of changes in the adjacent mucosa in different types of gastric carcinoma is summarized in the Table.

<table>
<thead>
<tr>
<th>Tumor type</th>
<th>Intestinal metaplasia</th>
<th>Atrophic gastritis</th>
<th>Chronic gastritis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intestinal</td>
<td>7</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Diffuse</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Signet ring</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Colloid</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

In addition to the presence of neutral mucins seen normally in gastric mucosa, the tumor tissue and adjacent mucosa showed positivity for neutral mucins, acid mucins and sulphomucins in varying combinations. Sulphomucins were seen to predominate in the intestinal type of gastric carcinoma. The adjacent mucosa in this type showed evidence of intestinal metaplasia, which also showed higher percentage of positivity for sulphomucins.

Thus, whereas the intestinal type of gastric carcinoma arises on the background of intestinal metaplasia, the diffuse type of carcinoma arises on a normal gastric mucosa. The mucosal changes and mucin profile of the other types of gastric carcinoma show a closer semblance between the signet ring type and the intestinal type of carcinoma. Colloid carcinoma seems to have a close semblance to the diffuse type of carcinoma.

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**Initial experience with ribavirin plus glycyrrhizin in renal allograft recipients with chronic hepatitis C**

Hepatitis C virus (HCV) infection is the most common cause of chronic liver disease among renal allograft recipients (RARs) and may be seen in 10%-40% of such patients. HCV infection often runs an accelerated course in immunosuppressed patients. Interferon therapy is not recommended in RARs due to significant risk of graft rejection. Ribavirin monotherapy has been found to be unsuccessful in clearing the virus.

Glycyrrhizin has been used for more than 20 years as treatment for chronic hepatitis. Several studies have documented its beneficial effect on transaminase levels and liver histology in cases with chronic hepatitis C. We therefore planned a prospective controlled study to compare the efficacy of combination treatment with glycyrrhizin plus ribavirin versus ribavirin monotherapy in RARs with chronic hepatitis C (CHC).

All consecutive RARs with CHC, who were HCV RNA positive, had ALT >1.5 times upper limit of normal (40 IU/L) and had histological activity index >3, underwent clinical evaluation. HCV RNA was estimated by RT PCR and liver histology by Knodel Ishaq scoring. Patients were treated with glycyrrhizin 40 mL (IV daily for 8 weeks followed by alternate day for 8 weeks and then twice a week for 8 weeks) and ribavirin 1000 mg p.o. in two divided doses per day (Group A) or with ribavirin alone for 6 months (Group B). Patients were re-evaluated every month for biochemical response and after 12 months for virological (HCV RNA) and histological response.

The hospital ethics committee had approved the study and informed consent was taken from all patients. The two groups were compared by student’s t test for unpaired data or chi square test.

There were ten patients in Group A and 15 in Group B. Their mean age was 37.5 (SD 9.7) and 38.7 (6.7) years, respectively; all were men. Six patients in Group A and 12 in Group B completed the full course of therapy. Initial and post-therapy ALT levels in treated patients in Group A were 118.6 (50.9) and 74 (53.7) IU/L (p=0.009), respectively and in Group B were 136.4 (39.2) and 127.1 (39.4) (p=ns), respectively. Mean pre- and post-therapy HAI scores were 6.3 and 5.3 in Group A and 5.4 and 6 in Group B, respectively (p=ns). Biochemical response was seen in 4/6 patients in Group A and 3/12 in Group B, while histological response was seen in only one patient in Group A. Two of 6 patients in Group A and none in Group B became HCV RNA negative at the end.
of treatment. One of these two has completed additional 6 months’ follow up and has remained HCV RNA negative.

The cause of drop out in two patients in Group A was rise in serum creatinine during the 3rd and 4th months of treatment. Kidney biopsy in these patients showed diffuse infiltration of glomulare, tubules and interstitium with lymphocytes. This prompted us to do a kidney biopsy in all patients on glycyrrhizin. All except these two were found normal. One of these two was treated as a suspected episode of acute rejection while the other remitted on stoppage of trial drug without any specific therapy. The other drop outs (2 in Group A, 3 in Group B) were related to drug non compliance.

Thus, in RARs with CHC, combination therapy with glycyrrhizin and ribavirin led to significant reduction in ALT levels, and virological response in one third of patients who completed 6 months of therapy. This is the first study showing benefit in RARs with CHC treated with these drugs. Previous studies with glycyrrhizin have all been carried out in immune-competent patients.

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Evaluation of primary duct closure vs T-tube drainage following choledochotomy

Routine drainage of the common bile duct (CBD) following choledochotomy is unnecessary as it prolongs hospital stay and increases the postoperative morbidity. The choledochotomy wound can safely be closed primarily after CBD exploration.

The use of T-tube is associated with complications like bile leak, dislodgement and even breaking of the T-tube, formation of encrustations leading to difficulty in removal of tube, duct stricture, cellulitis around the T-tube, cholangitis, trauma to duct and subsequent biliary leak during tube removal and delayed healing of the CBD wound. The continuous external drainage of bile can sometimes lead to nutritional disturbances. Despite its obvious advantages and various reports in literature, primary duct closure is still not being performed routinely.

Forty consecutive patients undergoing elective minilap cholecystectomy and CBD exploration for gallstones with CBD stones (proved preoperatively on ultrasonography) were studied prospectively. Patients with previous biliary surgery, acute cholangitis, acute pancreatitis, CBD diameter >2.5 cm, papillary stenosis, or retained stone after completion cholangiography were excluded. Patients were randomly divided in two groups: Group A (ages 20-65 years, mean 45.3) underwent primary closure of CBD, group B (ages 31-65 years, mean 51) had T-tube drainage after CBD exploration.

In group A, the supraduodenal choledochotomy incision was closed using continuous 4-0 vicryl suture. Before applying the last stitch in the CBD wall, a saline-filled 5F feeding tube was inserted into the CBD distally, 20 mL of Contrastin 76% was slowly injected and cholangiogram film obtained. Once the dye showed free flow into the duodenum and absence of residual stone in the CBD, the last stitch was applied to close the rent in the CBD. In group B, a guttered T-tube of 12F diameter was inserted for drainage of the CBD. In both groups the abdomen was closed with subhepatic drain. In group B, T-tube cholangiogram was performed on the 12th day and tube was removed after confirmation of free flow of contrast with no residual stone.
The mean duration of surgery was 87.75 min in group A and 116.65 min in group B (p<0.001). The mean duration of pain requiring analgesia was 3.35 days and 5.3 days, respectively (p<0.001). Postoperative ileus was prolonged in group B (p<0.001). None of the patients in group A and four patients in group B had fever. In three of these four patients fever was due to T-tube-related complications. None of the patients in group A and 4 patients in group B had wound infection.

In seven patients (35%) of group B organisms grew in the bile despite the fact that their intra-operative bile culture was sterile. In two patients (10%) of group B peritubal bile leakage occurred. One of these developed rapidly spreading necrotizing fasciitis of the abdominal wall and septicemic shock leading to death. The other patient had biliary peritonitis following T-tube removal. The T-tube tract was used to put another drain in the peritoneal cavity for biliary drainage. The patient responded to conservative treatment and bile leak ceased spontaneous on the 19th postoperative day.

The mean hospital stay was 4.4 days and 15.4 day in groups A and group B, respectively (p<0.0001).

At one month, 3 months and 6 months follow up, neither the symptoms nor the ultrasonography were suggestive of retained stones or biliary stricture in any patient. The overall incidence of morbidity was 5% and 40% while overall mortality was 0% and 5% in groups A and B, respectively.

The recommendation for T-tube drainage is based on three arguments: (i) postoperative decompression of CBD should outflow obstruction occur, (ii) ease of postoperative X-ray visualization of the CBD, and (iii) potential for T-tube extraction of retained CBD stones. However the routine application of cholangioscopy or completion cholangiography plus the availability of ERCP for stone extraction have reduced the importance of these indications for T-tube drainage. Moreover, the use of T-tube is associated with numerous complications. When we compare the postoperative morbidity of T-tube drainage with primary closure of CBD in terms of pain, fever, chest infection, wound infection and hospital stay, we find the latter to be the procedure of choice.

T-tube drainage following choledochotomy is associated with increased bile infection and wound infection. Significant bile leak following T-tube removal is said to occur in 1.2%-30% of cases. External loss of bile through the T-tube may lead to slow wound healing, anorexia and constipation (post choledochostomy acidotic syndrome). Reinhoff proposed that the incidence of recurring stones would be greater in choledochotomy followed by T-tube drainage. The T-tube acts as a foreign body around which bile pigments and bile salts may precipitate.

In conclusion, the use of T-tube following routine choledochotomy is unnecessary and increases postoperative morbidity and mortality. Primary closure of CBD is more safe and physiological and the procedure of choice following routine choledochotomy.

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Radiation therapy in carcinoma esophagus – a ten-year experience

In developing countries patients with carcinoma esophagus usually present with advanced disease. A combination of external and intraluminal radiation therapy is useful to palliate these patients. We report the findings of a retrospective study done on patients with carcinoma esophagus who were treated with external radiation therapy followed by intraluminal brachytherapy.

Between 1989 and 1999, 123 patients with carcinoma esophagus received external radiation therapy followed by intraluminal radiation as a planned procedure. The external RT dose was 40-45 Gy over four weeks by conventional fractionation, delivered with a cobalt teletherapy unit. Intraluminal radiation was given by Selectron (Nucletron, Netherlands) LDR radiation unit. The dose was 10–15 Gy at 1 cm from the catheter in one fraction.

Patients included in the study were those with biopsy-proven carcinoma who were unwilling or unfit for surgery. Those with metastases were also included. Of the 123 patients studied (64 men), 26 (21.1%) had disease in the upper third, 67 (54.5%) in the middle...
third, and 30 in the lower third (24.4%). All patients had squamous cell carcinoma. Thirteen patients had metastases at presentation.

Nine patients did not follow up after completion of treatment. Three patients did not tolerate the Selectron applicator and pulled out the applicator before completion of treatment. Seventy-eight of 114 (68.4%) patients had relief of dysphagia at 6 weeks; 18 (15.8%) patients continued to have dysphagia following treatment. Twenty patients (17.5%) developed a stricture requiring dilatation. Six patients developed a tracheo-esophageal fistula, of which two were a complication of dilatation of post-radiation stricture and four were due to disease. Survival analysis was hindered by poor follow up. Sixteen of 114 (14.0%) patients were alive at the end of the first year; two patients (1.8%) were alive at the end of ten years.

Caspers et al1 studied 35 patients with carcinoma esophagus treated with external beam radiation therapy and low-dose-rate intraluminal brachytherapy. They reported dysphagia relief in almost 90% at six weeks; in our patients it was 68.4%. Vivekanandan et al2 reported post-radiation stricture in 59% in their study of 58 patients. In our series 17.5% of patients developed a stricture requiring dilatation. Despite advances in its treatment, radiation continues to be an important means of palliating patients with carcinoma esophagus.

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References

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Pre-vaccination screening for hepatitis B infection in high-risk population: is HBsAg alone adequate?

Conventionally, testing of HBsAg alone is done for pre-vaccination screening against hepatitis B virus (HBV). However, some patients with chronic hepatitis B in the non replicative stage become HBsAg negative with time; the annual rate of delayed clearance of HBsAg has been estimated to be 0.5%-2%.1 Similarly, HBsAg is not detectable in patients with “occult” HBV infection (defined as detection of HBV DNA and/or anti HBe with or without anti HBs). Occult HBV infection has been reported from India as well as other countries.2,3

We conducted a study to estimate the prevalence of HBV infection in high-risk groups. The 103 subjects studied were inmates of a home for mentally challenged children (n=27), inmates of a home for juvenile delinquents (46), and medical personnel (30). Detailed information regarding high-risk behavior including intravenous drug abuse, needle prick, sexual exposure and transfusion was gathered. All subjects were examined to exclude liver disease. Subjects with previous history of hepatitis B vaccination were excluded. Serum specimens were stored at -20°C in multiple aliquots. All sera were tested by enzyme immuno assay (EIA) for HBsAg, antibodies to hepatitis B core antigen (anti Hbc) and antibodies to HBsAg (anti HBs) (Dia sorin, saluggia [UC], Italy).

Overall, 7 subjects (6.7%) were HBsAg positive, 14 (13.7%) were anti Hbc positive, and 25 (24.37%) were anti HBs positive (Table). Of 7 subjects who were HBsAg positive, 5 (4.9%) had both HBsAg and anti Hbc positivity. The number of subjects diagnosed to have HBV infection by HBsAg alone was 7 (6.7%), by HBsAg+anti Hbc was 16 (15.5%), by HBsAg+anti HBs was 32 (31.1%), and by a combination of all three tests was 41 (39.8%).

<p>| Table: Distribution of HBV markers in high-risk group |</p>
<table>
<thead>
<tr>
<th>Parameters</th>
<th>Mentally challenged children (n=27)</th>
<th>Inmates of juvenile home (n=46)</th>
<th>Medical personnel (n=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (y)</td>
<td>17.3 (0.9)</td>
<td>14.3 (3.3)</td>
<td>36.3 (10.4)</td>
</tr>
<tr>
<td>Male: female</td>
<td>12: 15</td>
<td>46: 0</td>
<td>22: 8</td>
</tr>
<tr>
<td>HBsAg positive, anti Hbc negative, anti HBs negative</td>
<td>0 (0%)</td>
<td>2 (4.3%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>HBsAg negative, anti Hbc positive, anti HBs negative</td>
<td>5 (18.5%)</td>
<td>1 (2.2%)</td>
<td>3 (10%)</td>
</tr>
<tr>
<td>HBsAg positive, anti Hbc positive, anti HBs positive</td>
<td>1 (3.7%)</td>
<td>3 (6.5%)</td>
<td>1 (3.3%)</td>
</tr>
<tr>
<td>HBsAg negative, anti Hbc negative, anti HBs positive</td>
<td>1 (3.7%)</td>
<td>11 (23.9%)</td>
<td>13 (43.3%)</td>
</tr>
<tr>
<td>All negative</td>
<td>20 (74.1%)</td>
<td>29 (63.0%)</td>
<td>13 (43.3%)</td>
</tr>
</tbody>
</table>

The actual prevalence of HBV infection was 39.8% (41/103) in this cohort, compared to the prevalence of HBsAg alone, which was 6.7% (7/103). Thus HBV infection would have been missed in a large number of subjects, leading to unnecessary vaccination. Testing for all three markers increases the overall cost of a vaccination program; cost-effective test methods are therefore required.

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Letters
Markers of bone turnover in prepubertal children with celiac disease

Active celiac disease (CD) is known to predispose patients to disturbances in bone metabolism.\(^1,2\) However, little information is available on biochemical bone turnover markers in prepubertal celiac children treated with gluten-free diet (GFD).\(^3,4\)

We investigated 5 children with celiac disease (age range 1.5-8 years; 3 girls). Celiac disease was confirmed by villous atrophy, crypt hyperplasia, increased intraepithelial lymphocyte counts on duodenal biopsies, and positive antiantiendomysial antibodies on gluten diet. Bone turnover markers were tested after patients were on GFD for 0.5-3.5 years. The markers (25-hydroxycholecalciferol [25OH-D vitamin], calcium and phosphate) were measured 3 times on GFD, over 1.5 years (0, 9, 18 months). Compliance with the diet was ascertained by negative results of testing for antiantiendomysial antibodies. Calcium and 25OH-D supplements were not given or recommended. Body mass index (BMI) was calculated from anthropometric data. The reference group consisted of 25 healthy children (range 2-8 years; 15 girls) sent to our laboratory for other tests. None of the patients or controls and was not affected by treatment. We found the same trend for BALP, whilst for CTX, which like NTX is a resorption marker, an opposite trend was noted. Lower CTX levels may suggest disturbances in the bone resorption process.

Our observations show normalization of bone resorption and formation markers in serum in most patients with celiac disease on GFD. However, some cases had changes in the pattern of bone turnover markers. Further studies of these patients are needed to assess their predisposition to metabolic bone disorders.

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**Table: Clinical and biochemical data of patients with celiac disease**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age at diagnosis (y)</th>
<th>BMI (Kg/m²)</th>
<th>CTX (µg/L)</th>
<th>OC (µg/L)</th>
<th>BALP (U/L)</th>
<th>25OH-D vitamin (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>1.0</td>
<td>15.1; 14.8; 14.7</td>
<td>1.11; 1.42; 1.92</td>
<td>63.5; 92.3; 120.7</td>
<td>105.9; 88.2; 118.5</td>
<td>43.2; 36.1; 50.4</td>
</tr>
<tr>
<td>M</td>
<td>1.5</td>
<td>13.9; 12.8; 13.3</td>
<td>2.17; 2.05; 1.42</td>
<td>50.8; 77.3; 69.2</td>
<td>62.2; 104.0; 137.8</td>
<td>54.8; 25.2; 40.0</td>
</tr>
<tr>
<td>M</td>
<td>1.5</td>
<td>16.2; 15.9; 16.2</td>
<td>1.64; 0.99; 1.33</td>
<td>71.8; 38.5; 22.5</td>
<td>52.6; 55.1; 70.3</td>
<td>24.7; 24.2; 23.8</td>
</tr>
<tr>
<td>F</td>
<td>3.0</td>
<td>12.7; 13.0; 12.9</td>
<td>2.51; 1.08; 1.12</td>
<td>99.6; 109.5; 91.8</td>
<td>164.9; 105.4; 117.8</td>
<td>20.3; 27.9; 24.1</td>
</tr>
<tr>
<td>F</td>
<td>3.0</td>
<td>13.2; 13.6; 13.4</td>
<td>0.71; 1.0; 1.29</td>
<td>102.5; 104.0; 103.3</td>
<td>99.8; 109.6; 104.7</td>
<td>20.3; 23.3; 26.6</td>
</tr>
</tbody>
</table>

Data expressed are values obtained at 0, 9 and 18 months on GFD.
Pseudoxanthoma elasticum: a rare cause of recurrent gastrointestinal bleeding in a child

Pseudoxanthoma elasticum (PXE) is an inherited connective tissue disorder characterized histologically by elastorrhexis affecting the elastic tissues in the dermis, blood vessels and Bruch’s membrane of the eye. The diagnosis is based on the presence of classical skin lesions, angioid streaks, and demonstration of characteristic findings on skin biopsy. Patients with PXE are known to present with recurrent upper gastrointestinal (UGI) bleeding.

An 11-year-old boy presented with recurrent painless UGI bleeding (hematemesis and melena) since the age of 4 years. None of the bleeding episodes was associated with ingestion of drugs, jaundice or encephalopathy. Repeated UGI endoscopies, abdominal ultrasonography, barium meal follow-through and liver biopsy had not revealed any diagnosis. During the present admission, he had severe pallor and splenomegaly. On UGI endoscopy, there were no esophageal varices but there was a pool of blood in the gastric fundus. In addition, the gastric folds appeared prominent in the gastric fundus and an active ooze was seen. Ultrasonography showed normal liver and portal vein; the splenic vein could not be visualized.

Despite blood transfusion and gastric tamponade with a Sengstaken-Blakemore tube, GI bleeding continued. With a provisional diagnosis of portal hypertension due to splenic vein thrombosis, gastric devascularization and splenectomy were done.

One month after surgery, the patient was noted to have multiple papules of 1 mm to 4 mm diameter; a few of those coalesced to form plaques, all round the neck, axilla and groin. The skin was lax and redundant in the neck and its surface was rough and plebby. Ocular fundus examination revealed angioid streaks and multiple peripapillary mottling in both eyes. Skin biopsy from the involved area in the neck showed focally thickened epidermis, fragmented elastic fibers in the reticular dermis along with collection of histiocytes, and giant cells in the dermis and calcification. Repeat endoscopy showed normal gastric mucosa. Histology of the splenectomy specimen revealed fragmented elastic fibers in the large-sized muscular arteries, with calcification. Ultrasonography and CT scan of the abdomen showed diffusely scattered calcific specks in the cortex and medulla of both the kidneys, suggesting nephrocalcinosis. Biochemical investigations including serum calcium, serum phosphate, serum proteins, renal function tests, and 24-hour urinary excretion of sodium, potassium, calcium, inorganic phosphate, creatinine and proteins were within normal limits. Urinary ammonium chloride load test for acid excretion and arterial pH were also normal.

In a review of 200 patients with PXE collected from the literature, GI bleeding was reported in 13% of patients. It is usually gastric in origin, and recurrent. Our patient had the first episode of UGI bleeding at the age of 4 years, which is the youngest age at onset of bleeding reported in patients with PXE. GI bleeding is thought to result from degeneration of the elastic fibers in the arterial wall, which leads to aneurysmal dilatation and subsequent rupture of the vessels. The inability of arteries to retract also increases chances of hemorrhage from unrelated causes such as peptic ulcer disease or other mucosal injuries. The characteristic endoscopic findings include distinctive yellow cobblestone appearance or nodular raised submucosal lesions similar to xanthoma-like lesions of the skin as seen in this condition.

Our patient also had evidence of nephrocalcinosis. The renal calcification in PXE is generally limited to the cortico-medullary junction. To the best of our knowledge, diffuse renal calcification has not been described earlier in patients with PXE. It is possible that these calcific specks represent areas of vascular degeneration with calcification in the renal parenchyma.

There is no specific treatment for PXE. Anti-secretory drugs and vasoconstricting agents are frequently unsuccessful in controlling bleeding. Angiographic embolization of involved vessels has been used with variable results. Partial gastrectomy, total gastrectomy, oversewing of the bleeding site and gastric devascularization are the usual surgical options in patients who have recurrent UGI bleeding. Gastric devascularization done in our patient with a presumptive diagnosis of portal hypertension incidentally is also a mode of treatment for gastric bleeding in patients with PXE.
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Second primary malignancy of oropharynx with hepatocellular carcinoma
A 60-year-old man, consuming alcohol for over 20 years, was on regular follow up for ulcer-type dyspepsia of 2 years’ duration. At endoscopy he had had a benign, gastric ulcer in the juxta-pyloric region, which was treated. He presented recently with dysphagia and hoarseness of voice for 15 days, in addition to anorexia, epigastric pain and discomfort.

On examination, the patient was sick; tenderness was present in the epigastrium. Liver was enlarged; it felt nodular and hard. Ultrasonography showed a heterogenous mass, 8 cm × 5 cm, involving the 5th and 8th segments of the liver, and two 2 cm × 2 cm satellite bull’s eye lesions adjacent to the large tumor. Serum alpha fetoprotein level was 60,000 ng/mL. Fine needle aspiration cytology of the lesion confirmed hepatocellular carcinoma (HCC). Upper GI endoscopy revealed a polypoidal fleshy growth involving the oropharynx posterior to the epiglottis. Biopsy confirmed squamous cell carcinoma.

Oropharyngeal squamous cell carcinoma has high predilection for development of a second primary lesion, the incidence varying from 10%-27%.1,2 A majority are in the upper aerodigestive system. The ‘field cancerization theory’ suggests that multiple neoplastic lesions of independent origin occur within an epithelial field in response to chronic tobacco and alcohol exposure in combination with endogenous processes.3

There is no reported increase in risk of cancer in viscera outside the respiratory and upper digestive tract. In one series1 of 440 cases of HCC, 13 had second primary and in 4 the site was colorectum. One case of esophageal carcinoma was identified. None had oropharyngeal carcinoma. This case is being reported for the rare combination of two primary sites of malignancy of the GI tract of two different cell origin.

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