Endoscopic Features of Esophageal Varices According to Japanese Description in Cirrhosis

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Summary: *In 40 decompansated liver cirrhosis, endoscopic features of esophageal varices were investigated according to Japanese description. Three features were significantly associated: the size, extend and red color signs of Esophageal varices (EV). The size of esophageal varices were significantly associated with their extent and the presence of red signs. 10 patients had Red color (RC) sign and all of them had history of variceal bleeding. According to our study, RC sign has a better predictive value for bleeding than the size or the form of red signs on endoscopic varices could be more accurate in predicting hemorrhage. No relationship could be established between esophageal and gastric features.*

We conclude that classification of esophageal varices according to Japanese description are useful to define appearance of varices and prophylactic therapies.

Key Words Esophageal varices, Endoscopic Features, Japanese Description.

Liver cirrhosis is most important cause of portal hypertension. EV and variceal hemorrhage are very important clinical findings. Nowadays, gastroesophageal endoscopic features of portal hypertension are the recognized predictive factors for bleeding and conseguently allow the selection of patients for prophylactic therapies. Association between the endoscopic feature in cirrhosis had never seen systematically studied. Classic description of Ev seems unrealistic to us. Therefore, Japanese description of EV is best and realistic description for endoscopic feature of EV.

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The aim of this Prospective work was to investigate the associations of these features between themselves the aggrement between different observers, and the relationship of these feature to the hemorrhage of EV.

MATERIALS and METHODS

During a 6-mo period, all consecutive patients with cirrhosis were considered for the study. Diagnosis of 40 cirrhotic patients (26 male, 14 female, mean age 36.8 years) were done by physical examination, laboratory findings, ultrasonography (Toshiba model SSA-90 A with 3.75 mHz linear probe and a 3.75 mHz convex probe), liver biopsy (in 8 patients). Endoscopic examination was done by Pentax FG 32X equipment.

Endoscopic features of EV were classified into four main categories (1).

I- Fundamental color of the varices. (Color).

1. White varices (Cw). Varices that are of white color and those that look like large folds of the esophageal mucosa are to be included in the Cw category.

2. Blue varices (Cb). Varices that are of blue color and those that are distended by blood and look bluish-white or cyanotic are to be included in the Cb category.

II. Red Color sing on the Variceal Surface (RC Sign). The RC Sign is divided into the following 4 subcategories.

1. Red wale markings. Dilated venules are longutudinaly oriented on the variceal surface.

2. Cherry red spots. Small red spots (usually about 2mm in diameter) are noted on the variceal surface.

3. Hematocystic Spot: A large round crimson-red projection (greater than 4mm in diameter), which looks like a blood blister and is usually located solitarily on the variceal surface.

III. Form of the varices (F). The varices are classified into 3 groups according to shape and size.

1. Form 1 (F-1). Straight shaped. The proposed general rules do not pertain to small venous dilatations which dissapear with insufflation.

2. From 2 (F-2). Slightly enlarged tortuous varices occupying less than one-third of the esophageal lumen.

3. From 3 (F-3). They are coil-shaped end occupy more than one third of the esophageal lumen.

IV-Location of the varices (L). The longitidunal placement of different caliber varices is determined by dividing the esophagus into 3 distinct areas.

1. Locus superior (L_S). Varices located at or near the level of the tracheal bifurcation.

2. Locus medialis (L_m). Varices located at or near the level of the tracheal bifurcation.

3. Locus inferior (L_i). Varices located within the area encompassing the abdominal and lower thoracic esophagus.

If varices are noted in the gastric fundus, they should be designated 1g positive (Lg^+), with respect to erosive or ulcerated esophagitis, its presence or absence should be clearly identified as E^+ (esophagitis positive) or E^- (esophagitis negative).

For example: If a patients has F_1,L_m,C_b, RC (+), Lg (-) endoscopic features, that's mean is, his EV has Form-1, medial location, blue color varices, RC sign positive EV characters and negative gastric varices.

RESULTS

Findings of endoscopic appearance of EV were presented in Table 1. In our study group, 28 patients had white varices (C_W), 12 patients had blue varices (C_b). RC sign were seen in 10 patients of 40 patients, and all of them had history of varices hemorrhage in last one month. Form of varices were F_1 in 12 patients, F_2 in 20 patients, F_3 in 8 patients. Locations of varices were Li in 10 patients, L_m in 29 patients, L_S in 1 patient. While esophagitis were positive in 7 patients, 33 patients had not esophagitis. Only 5 patients had gastric varices.

History of bleeding was higher in Form 2 (F_2) group than in Form 1 (F_1) group. That is, F_2 varices has much higher bleeding risk than F_1. There was no relationship between EV and gastric varices.

DISCUSSION

EV are result of portal hypertension in liver cirrhosis. Endoscopic features and relationship between hemorrhage and prognosis were investigated by different investigators

Table I: Findings of endoscopic examination of EV.

	No. of Patients	Frequency (%)
Color		
C_w	28	70
C_b	12	30
RC Sign (+)	10	
Red wale markings	1	
Cherry-red spot	7	
Hematocystic spot	1	
Diffuse redness	1	
Form		
F_1	12	30
F_2	20	50
F_3	8	20
Locus		
L_i	10	25
L_m	29	72.5
L_s	1	2.5
Gastric Varices		
Yes	8	7.5
No	37	92.5
Esophagitis		
Yes	7	17.5
No	33	82.5

(1,2,3,4). Association between the endoscopic feature in cirrhosis had never seen systematically studied. Classic description of EV seems unrealistic to us because of increasing of a lot therapies (i,e sclerosing, variceal therapy. B-bloker using, percutan transhepatic esophageal varices obliteration etc). For primary prophylactic therapies (5,6,7,8). Therefore, we need new, useful and accurate description for endoscopic appearance of EV. İn our mind, Japanese description (9) of EV seems realistic and useful to us.

Three features were significantly associated; the size, extent and red signs of EV. Generally, size of EV is important predictive factor for bleeding. But, in retrospective study (10), were suggested that red signs had a better predictive value for bleeding than the size or the extent of EV. Recently, in a prospective study (11), the presence of red signs (red wale markings) and size of varices were independent predictive factors for first bleeding; however, the prevalance of red wale markings doubled when the grade of variceal size increased (11,12). İn another study, only the presence of the red sign or of concomitant fundic varices was an independent prognostic factor first bleeding (7). In our study, RC sign was in the positive history of variceal hemorrhage. This result seem same with other studies. That is, RC is very important predictive factor in our cirrhotic patients. History of bleeding was higher in Form 2 (F_2) group than in Form (F_1). On the other hand, locus medialis (Lm) EV had higher history of bleeding than locus inferior or locus superior EV. There was no relationship between EV and gastric varices. It has been suggested that in cirrhosis, gastric varices occured only when EV, especially of large size, were present.

Associations between the endoscopic features in cirrhosis had never seen systematically studied (13). It has been observed that cherry-red spots were present almost only on large EV. Considering the close relation between large EV and red signs found in our study and their predictive values for bleeding. It remains to be determined which of there 2 features bears the best predictive value for bleeding.

In conclusion, the aggrement between observers was good for the main endoscopic features encountered in esophagus and stomach in patients with cirrhosis. This was particularly true for the aspects known as being relevant for the prediction of bleeding risk, the size of EV and red signs. Therefore, Japanese description of EV is best description for endoscopic features of EV.

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