



1

2

3

43

37 (86.0%)

33 (76.7%)

41 (95.3%)

100%

94.6%

54.6%

(0 - IIb)

(early esophageal cancer)

(superficial esophageal cancer)

(1 - 6).

1991 1 1999 10

가 가 5 85 - 95%

가 가 37 , 43 가 6 39 75

59

(1 - 3).

9 31 L - tube 12

523

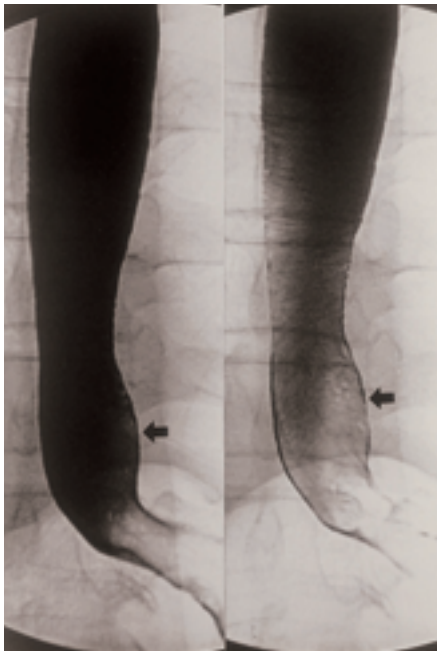
47 9.0%

+45

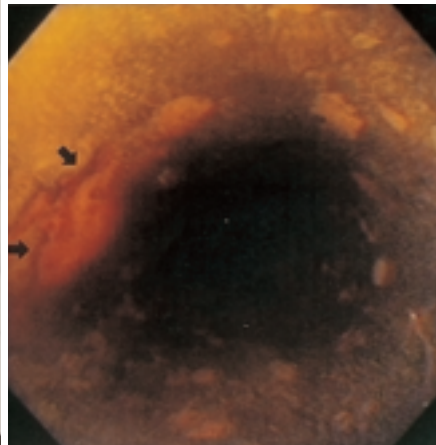
1995 3 17 26

1 4

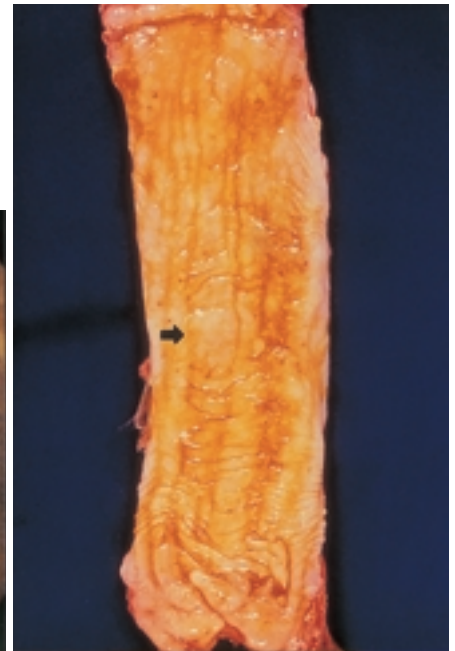
:  
 , (0 - III) 5 , (IIc+IIb) 1 (Figs. 1 - 3).  
 , 1 12 (37.5%)  
 가 .  
 가 33  
 (76.7%) , 가 6 (14.0%),  
 가 4 (9.3%)  
 43 36 , 4 ,  
 (basaloid carcinoma) 2 ,  
 1 . 4 ,  
 7 , 32 . 가 41 (95.3%),  
 , 가 2 (4.7%)  
 가 (p < 0.05) . (4 )  
 가 (7 ) 54.6% (6/11)  
 (0 - I) 100% (11/11) 4  
 21 , (0 - IIa) 3 , (0 -  
 IIb) 2 , (0 - IIc) 11 , 3 1



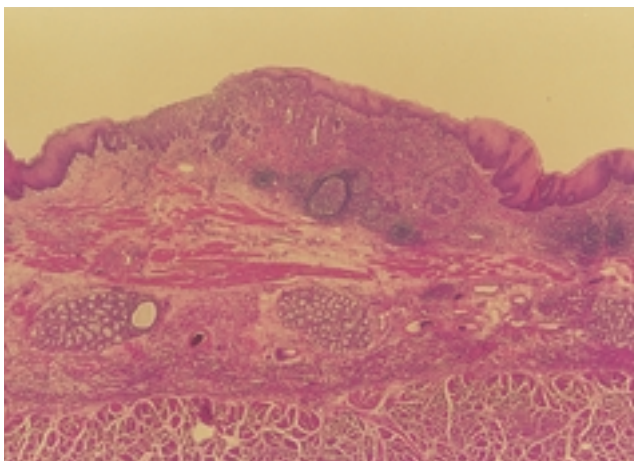
A



B



C



D

**Fig. 1.** 56 year-old man with superficial squamous cell carcinoma (0-IIa, mm).

**A.** Double contrast study shows slightly elevated lesion with tiny granularities on the surface at distal esophagus (arrow).

**B.** On endoscopic photograph with lugol spray, the elevated lesion is not stained with lugol (arrows).

**C.** Photograph of resected fresh specimen shows well demarcated elevated lesion (arrow).

**D.** Microphotograph reveals squamous cell carcinoma (H-E stain).

가 . 16

6 94.6% (35/37)  
(Table 1).

5

가

(1 - 4).

4

(1,7 - 9).

4 cm

), (plaque - like)

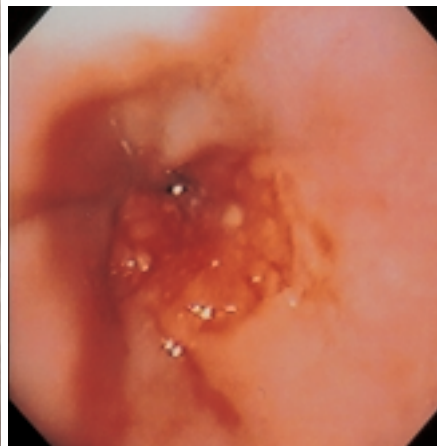
**Table 1.** Prediction of the Depth of Invasion on Double Contrast Study

Esophagography	Pathology			
	ep	mm	sm	total
Epithelial (ep)	1			1
Mucosal (mm)		4	1	5
Submucosal (sm)		1	30	31
Total	1	5	31	37

\* Overall accuracy = 94.6%



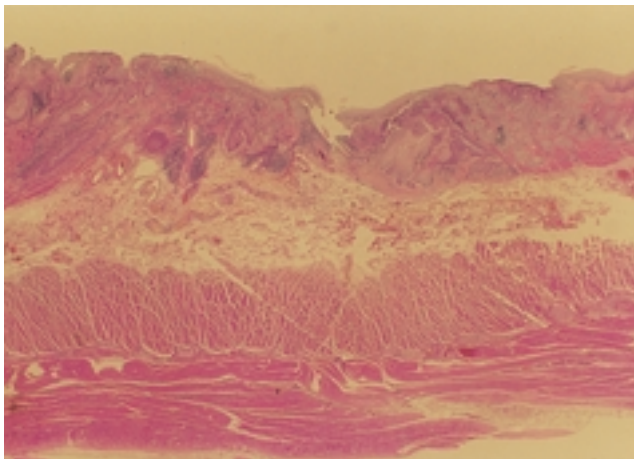
A



B



C



D

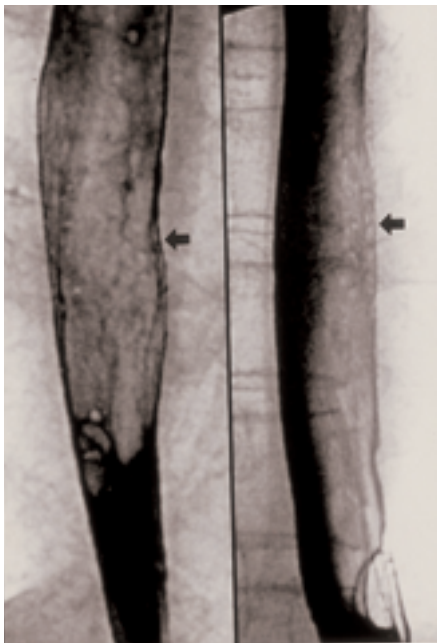
**Fig. 2.** 48 year-old man with superficial squamous cell carcinoma. (Double lesions: 0 - I, sm and 0 - I, mm)

**A.** Double contrast study shows about 2 cm well demarcated elevated lesion with a few nodularities on the surface at mid esophagus (arrow). On the lateral view, the lesion shows a shallow filling defect, marginal irregularity, and double contour.

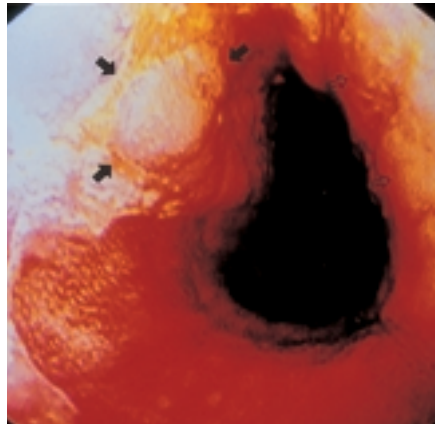
**B.** On endoscopic photograph, well demarcated, lobular shaped, elevated lesion with nodularities on the surface is demonstrated.

**C.** Photograph of resected fresh specimen shows two lesions. A larger one that was detected on double contrast study and endoscopy shows mild central depression (0 - IIc) within elevated lesion (0 - I) (black arrow). Another smaller one (less than 1 cm) below and left to the main lesion (open arrow), that was not detected on the double contrast study and endoscopy, shows slightly elevated lesion (0 - I).

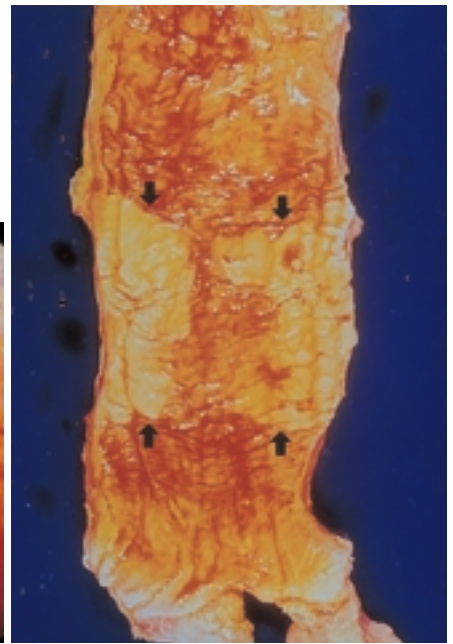
**D.** Microphotograph of a larger lesion reveals squamous cell carcinoma (H-E stain).



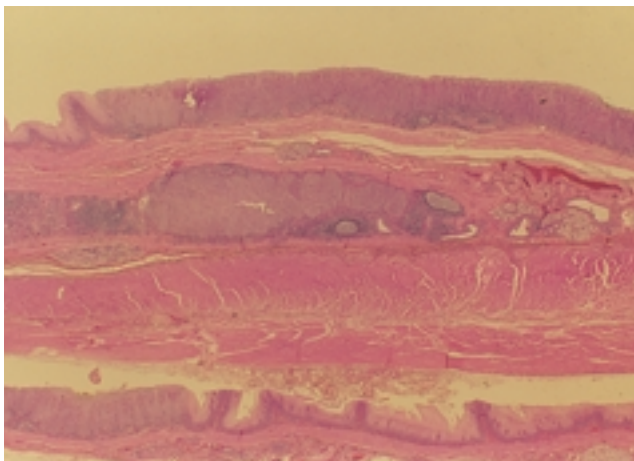
A



B



C



D

**Fig. 3.** 66 year-old man with superficial squamous cell carcinoma (0 - I, sm).

**A.** Double contrast study shows a poorly demarcated, widely spreading, irregular and variable sized nodularities in circumferential pattern at mid esophagus (arrow).

**B.** On endoscopic photograph, the lesion shows a polypoid mass with granular surface (black arrows), widely spreading, irregular nodularities and confluent, thickened fold-like lesions (open arrows).

**C.** Photograph of resected fresh specimen shows circumferential elevated lesion (arrows).

**D.** Microphotograph reveals squamous cell carcinoma (H-E stain).

(undulation),

,

1 - 2 mm

(3).

가

가

Yamaki

0 - IIb

가

(groove - like)

,

(1, 2, 7),

가

가

(5, 9, 13).

,

,

가

(1 - 3, 10 - 12).

가

Barrett

10%

,

가

가

(3).

가

nic acanthosis)

Yamada

100% 가

95% 가 (1, 8, 9, 14). 86.0%

76.7% 11 25.6%

55, (2), (1)

(20

), (3), (3

), (4) 가 가 1

Suzuki

가  
가  
가

(不整) , 가

(4) 46 (8). Ueyama

가

, , ,

, , ,

가

, 가

가 가 가

.

(1, 2, 5,

9 - 11, 14), 가

Itabashi (1)	Suzuki	(8)
37	35	가
94.6%	Suzuki	(1) 87.5%
	가	

4

가

가

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## Diagnosis of Superficial Esophageal Cancer: Comparative Study of Double Contrast Esophagography and Endoscopy<sup>1</sup>

Soo Yil Chin, M.D., Byung Hee Lee, M.D., Kie Hwan Kim, M.D.,  
Jae Soo Koh, M.D.<sup>2</sup>, Jae Il Zo, M.D.<sup>3</sup>

<sup>1</sup>Department of Radiology, Korea Cancer Center Hospital

<sup>2</sup>Department of Anatomical Pathology, Korea Cancer Center Hospital

<sup>3</sup>Department of Thoracic Surgery, Korea Cancer Center Hospital

**Purpose:** To assess the diagnostic accuracy and limitations of double contrast esophagography in patients with superficial esophageal cancer, as compared with endoscopic, gross and microscopic findings.

**Materials and Methods:** In 43 patients with pathologically proven superficial esophageal cancer, the detection rate and diagnostic accuracy of double contrast esophagography and endoscopy were compared. The depth of invasion revealed by esophagography, and grossly and microscopically in resected specimens, was compared.

**Results:** The detection rate and diagnostic accuracy were, respectively, 86.0% and 76.7% for esophagography, and 100% and 95.3% for endoscopy. In addition, very different detection rates (54.6% and 100%, respectively) were noted for epithelial and mucosal lesions. In flat-type cases (0-IIb), esophagography showed limited ability to detect lesions, but the accuracy of this modality in predicting the depth of tumor invasion was relatively high (94.6%).

**Conclusion:** In cases of superficial esophageal cancer, double contrast esophagography showed a lower detection rate and lower diagnostic accuracy than endoscopy, and this was especially so for epithelial and mucosal lesions. The modality was able, however, to reliably predict the depth of tumor invasion.

**Index words :** Esophagus, neoplasms

Barium

Endoscopy

Address reprint requests to : Soo Yil Chin, M.D., Department of Radiology, Korea Cancer Center Hospital  
215-4, Gongneung-dong, Nowon-gu, Seoul 139-706, Korea.  
Tel. 82-2-970-1251 Fax. 82-2-972-3093 E-mail: schin@kcchsun.kcch.re.kr