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Endoscopic Removal of Foreign Bodies from the Upper Gastrointestinal Tract in Children: Management of 78 Cases in Taegu, Korea

Byung-Ho Choe, M.D., Geun-Soo Park, M.D.* and Jin-Bok Hwang, M.D.†

Department of Pediatrics, Kyungbook National University School of Medicine,

*Keimyung University School of Medicine and

†The Catholic University of Taegu-Hyosung School of Medicine, Taegu, Korea

Background/Aims: Foreign body (FB) removal is a common indication of therapeutic endoscopy in children. The trend is becoming wider and more rational in application. The spectrum of upper gastrointestinal FB's in children during a recent 2 year period was reviewed in Taegu, Kyungbook Province in order to obtain a the consensus of recent trend of indications and techniques of endoscopic FB removal in children. **Methods:** Esophagogastrosocopy was performed on 78 children who had been referred to 3 University Hospitals in Taegu for FB ingestion from Oct. 1996 to Sep. 1998. **Results:** Age between 1 2 year was the peak age group; 22 cases (28%). Male to female ratio was 1.9 : 1. Thirty four cases (44%) were in the esophagus, 44 cases (56%) in the stomach. The majority (49%) of the FB's were coins, 26 of 34 esophageal FB's and 12 of 44 gastric FB's. Others were 14 sharp/pointed objects, 12 big/long objects, 7 toxic objects, etc. In 67 children (86%) the FB was successfully removed and spontaneous passage through the pylorus was observed in 9 children. **Conclusions:** Endoscopic FB removal can be performed safely and effectively in children with minimal or no complications by an experienced endoscopist. Proper arrangement should be conducted with consideration to the property of FB's, expected complication, and the possibility of an emergency situation. (**Korean J Gastrointest Endosc 2000;20:6 – 13**)

Key Words: Foreign bodies, Endoscopy, Upper gastrointestinal tract, Children

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 : , UNMC, 983285 Nebraska Medical Center,
 Omaha, NE 68198-3285, U.S.A.
 Tel: 001-1-402-559-4076, Fax: 001-1-402-559-6107
 E-mail: bhchoi@kyungpook.ac.kr
 1998

13 (17%), 3 4 11 (14%), 4 5 6 (8%), 5 6 8 (10%), 6 7 4 (5%), 7 6 (8%) (Table 1). 1.9 : 1 .

1.

1996 10 1998 9 24
3 78

2.

가 34 (44%), 가 44 (56%)
1, 2, 3 28 (36%), 4 (5%), 2 (3%) .
38 (49%) 가
34 26 (76%),
44 12 (27%) .
(pin, , , ,) 14 ,
(6 , 1) 7 ,
(9 , , ,) 12 ,
(4 , , ,) (Fig. 1 4).

2.

Olympus GIF
P230, XP30
grasping forcep, biopsy forcep, snare, basket, magnetic
extractor, , condom .
midazolam ketamine,
chloral hydrate .

3.

78 67
(86%)
가 9 (8 , 1)

1.

1 8 (10%), 1 2 22 (28%), 2 3

가

Table 1. Distribution of Age Regarding to the Site of 78 Foreign Bodies (The number of spontaneous passed foreign bodies is shown after + symbol)

Age	Site	Esophagus (1st)	Esophagus (2nd)	Esophagus (3rd)	Stomach	Pylorus	No. of cases
0 1	pin(1)				key(1+2), key holder(1), hair clip(1), button battery(1)	metal piece(1)	8
1 2	coin(4), Baduk stone(2), chicken bone(1)	coin(1), pin(+1)			key(4+1), hair clip(2+1), button battery(2+1), coin(1), Baduk stone(1)		22
2 3	coin(4), Baduk stone(1)				coin(3), pin(+1), key(1), metal wire(1), button battery(1), gold ring(1)		13
3 4	coin(3)				coin(3), coated tablets(1), plastic stick(1), syringe needle(1), token(+1), button battery(+1)		11
4 5	coin(5)	coin(1)					6
5 6	coin(3)	baby rattle-bell(1)			coin(4)		8
6 7	coin(2)			coin(1)	coin(1)		4
7	coin(1), metal wire(1)			coin(1)	dental flipper(1), pin(1), stone+3 coins(1)		6
No. of cases		28	4	2	43	1	78

Figure 1. Lodged foreign bodies. Endoscopic finding shows lodged foreign bodies such as coins, baby rattle-bell, metal piece in the esophagus and pylorus. Deep esophageal ulcer was noted after removal of coin.

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4.

5 2 .1

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가 .

1%

15 35%

가

5

가

3

가 .24

(, , , , ,)

가 , , ring, web,

가 .

Figure 2. Sharp or big/long foreign bodies. Endoscopic finding shows sharp or big/long foreign bodies such as pin, hair clip, dental flipper, stone, stick, chicken bone, etc.

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.6

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), 가 (6 cm),

가 (2.5 cm),

(,),

2

1

.346

, , ,

, , 7

가

가

snare, basket

가

.8

forcep,

6

condom

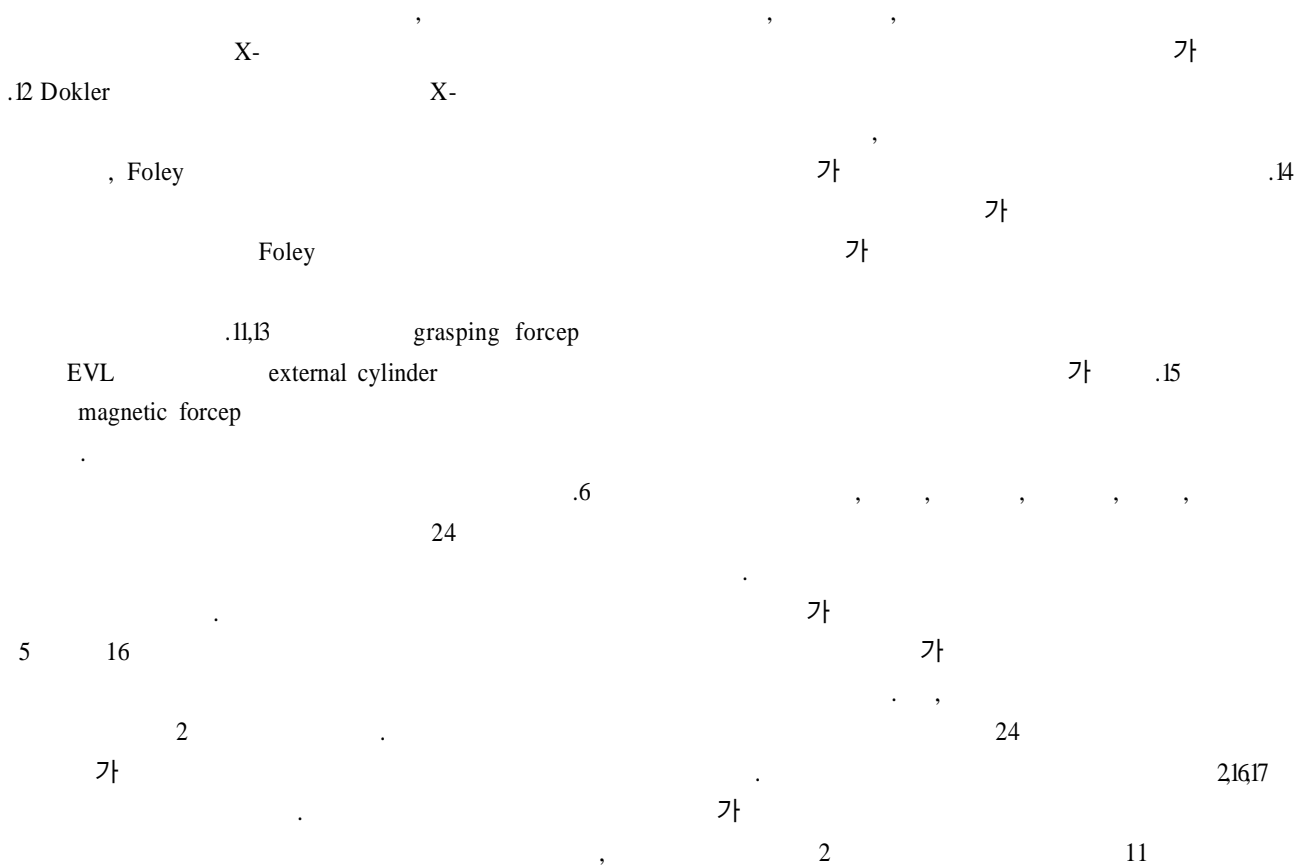
forcep

condom

forcep

.29

Figure 4. Miscellaneous foreign bodies. Endoscopic finding shows miscellaneous foreign bodies such as gold ring, Baduk stone, etc.



7

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14

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가 9 (

8 ,

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가가

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mm

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: 1996 10 1998 9

9 mm

2

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78

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Olympus GIF

P230, XP30

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grasping forcep, biopsy forcep, snare, basket, magnetic
extractor, , condom . : 1 2

forcep

forcep

가 22 (28%) 가 , 1.9 : 1

. 34 (44%), 44 (56%) ,

. Grasp-

49%

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26

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ing forcep

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가

14

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condom

snare

19

12

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가 7

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EVL

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.7

(86%)

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2

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midazolam

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flumazenil (anexateR)

.20

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