

## Background

The use of polyethylene glycol (PEG) in large volumes is required for bowel preparation prior to colonoscopy and is associated with considerable gastrointestinal (GI) distress. Therefore, a variety of approaches are currently being explored to address this issue, which include the development of novel bowel preparation agents or the use of PEG in reduced doses.

## Objective

To improve GI distress in patients undergoing bowel preparation for colonoscopy.

## Patients and Methods

- After completion of routine upper GI endoscopic procedures, bowel cleansing with injection of PEG into the duodenal second portion and the gastric body (1000 and 200-500 mL, respectively) was attempted in this study as a modality for bowel cleansing to alleviate GI distress.
- Of the 653 patients who underwent upper and lower GI endoscopy on the same day during the period between June 2011 and March 2013, a total of 152 patients who preferred PEG injection over conventional bowel preparations were included in the study to evaluate the efficacy of bowel cleansing with PEG injection as assessed by endoscopy and patient satisfaction with PEG injection to evaluate the usefulness of the modality. To reduce abdominal fullness during endoscopic examinations including PEG injection, CO<sub>2</sub> was used instead of room air for endoscopic insufflation.

### Bowel Preparation with PEG Injection in Patients Undergoing Both Upper and Lower GI Endoscopic Procedures in One Day

Start an upper GI endoscopic procedure

Inject 1000 mL of PEG directly into the duodenum first and then 500 mL of PEG into the stomach

Give 3 "itopride hydrochloride 50 mg" tablets, 30 minutes after the upper GI endoscopic procedure

3 hours after PEG injection, start a lower GI endoscopic procedure (colonoscopy)



### PEG injection using Gastroendoscope



## Results

- The 152 patients who opted for PEG injection (mean age, 63.0 years of age) included more females than males (85 versus 67 patients). Of the 152 patients enrolled in the study, a total of 147 patients in whom full-volume PEG injection was feasible were included for current analysis, with the exception of 5 patients who withdrew due to vomiting or vagal reflex during PEG injection into the duodenum.
  - The mean time required for the upper GI endoscopic procedures including PEG injection was 13.7 minutes (range, 6 to 20 minutes) with the grade of GI distress as reported by the patients being "comfortable" in 122 patients (80.3%), "neither comfortable nor uncomfortable" in 26 (17.19%), and "uncomfortable" in 4 (2.6%).
  - The status of bowel cleansing was "good" in 118 patients (77.6%), "acceptable" in 24 (15.8%) and "poor" in 10 (6.6%), with the level of patient satisfaction with the modality being "excellent" in 131 patients (86.2%), "moderate" in 13 (8.6%), and "poor" in 8 (5.3%).
  - The mean time from completion of the upper GI endoscopic procedures to the start of the lower GI (colonoscopic) procedures was 126 minutes (range, 45-270 minutes).
- No associated complication, such as aspiration pneumonia, was seen.

## Summary of Results

PEG injection success rate*	96.7% (147/152)		
Additional PEG fluid required**	7.2% (11/152)		
Volume of PEG fluid required (No. of patients)	0.5L	7	
	0.7-0.9L	2	
	1.0L	2	
Mean age (range)	63.0 years (51-86 years)		
Sex (M/F)	67/85		
GI endoscopy	Mean procedural time	13.7 minutes (6-20 minutes)	
	Grade of associated GI distress	"Comfortable"	80.3%
		"Neither comfortable nor uncomfortable"	17.1%
Status of bowel cleansing	"Uncomfortable"	2.6%	
	"Good"	77.6%	
	"Acceptable"	15.8%	
Mean time to cleansing (range)	"Poor"	6%	
	126 minutes (45-270 minutes)		
	Cecal intubation rate***	99.3% (151/152)	
Mean intubation time	6.4 minutes		
Patient satisfaction	"Excellent"	86.2%	
	"Moderate"	8.6%	
	"Poor"	5.2%	

\*13 patients withdrew due to vomiting or vagal reflex during PEG injection into the duodenum.

\*\*These were required additional PEG fluid intake for PEG injection.

\*\*\*One was not intubated into cecum due to poor bowel preparation.

## Conclusions

This pilot study showed that PEG injection during upper GI endoscopy allows both upper and lower GI endoscopic procedures to be performed on the same day and that it is convenient, feasible, useful and safe. A prospective comparative study is needed to prove the usefulness and efficacy of the modality over conventional bowel preparation.

**ARE ANESTHESIA FOR COLONOSCOPY SAFE?**

Reb Kundra, M.D.  
Fresno, CA

**Results**

**Conclusion**

1375

**TU1375 Bowel Preparation with Polyethylene Glycol (PEG) Injection after Upper Gastrointestinal Endoscopy**

TU1375 TF

Takahiro Fujii  
TF clinic, Tokyo, Japan

**Background**  
The use of polyethylene glycol (PEG) injection for bowel preparation prior to colonoscopy and its efficacy and safety of injection was recently being explored to address the issue, which includes the use of PEG in injected doses.

**Objective**  
To evaluate the efficacy and safety of PEG injection for colonoscopy.

**Patients and Methods**  
After completion of routine upper gastrointestinal endoscopy, 112 patients with scheduled colonoscopy were allocated to receive PEG injection (1.5 g/kg) or PEG solution (4 g/kg) for bowel preparation. The primary endpoint was the quality of bowel preparation, which was assessed by the endoscopist using the Boston Bowel Preparation Scale (BBPS) during the colonoscopy (June 2013).

**Results**

- The 112 patients were split for PEG injection (56) and PEG solution (56) groups. Of the 112 patients included in the study, a total of 147 patients in actual full-volume colonoscopy were included for current analysis, with the exception of 35 patients who withdrew due to unwillingness to participate in the study.
- The mean time required for the upper GI endoscopic procedures (including this time) was 23 minutes with the grade of GI cleanliness as assessed by the endoscopist being "satisfactory" in 82% (n=120) and "unsatisfactory" in 18% (n=27) and "unacceptable" in 0% (n=0).
- The grade of bowel cleansing was "good" in 111 patients (99%), "intermediate" in 28 (25%) and the grade of patient satisfaction with the procedure being "satisfactory" in 111 patients (99%), "good" in 0% (n=0).
- The mean time from completion of the upper GI endoscopic procedure to the start of the colonoscopy was 120 minutes (range, 45-210 minutes).

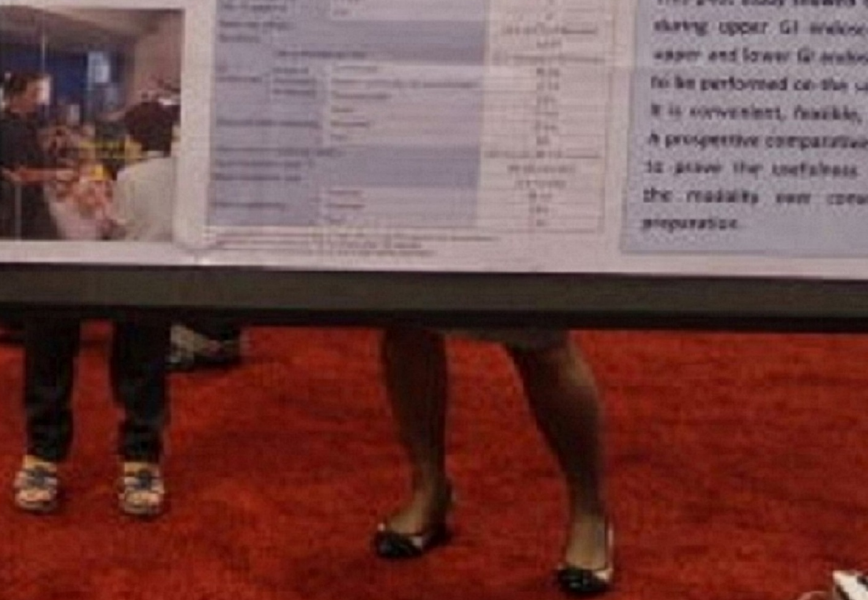
No adverse effect or complication, such as abdominal discomfort, was seen.

**Summary of Results**

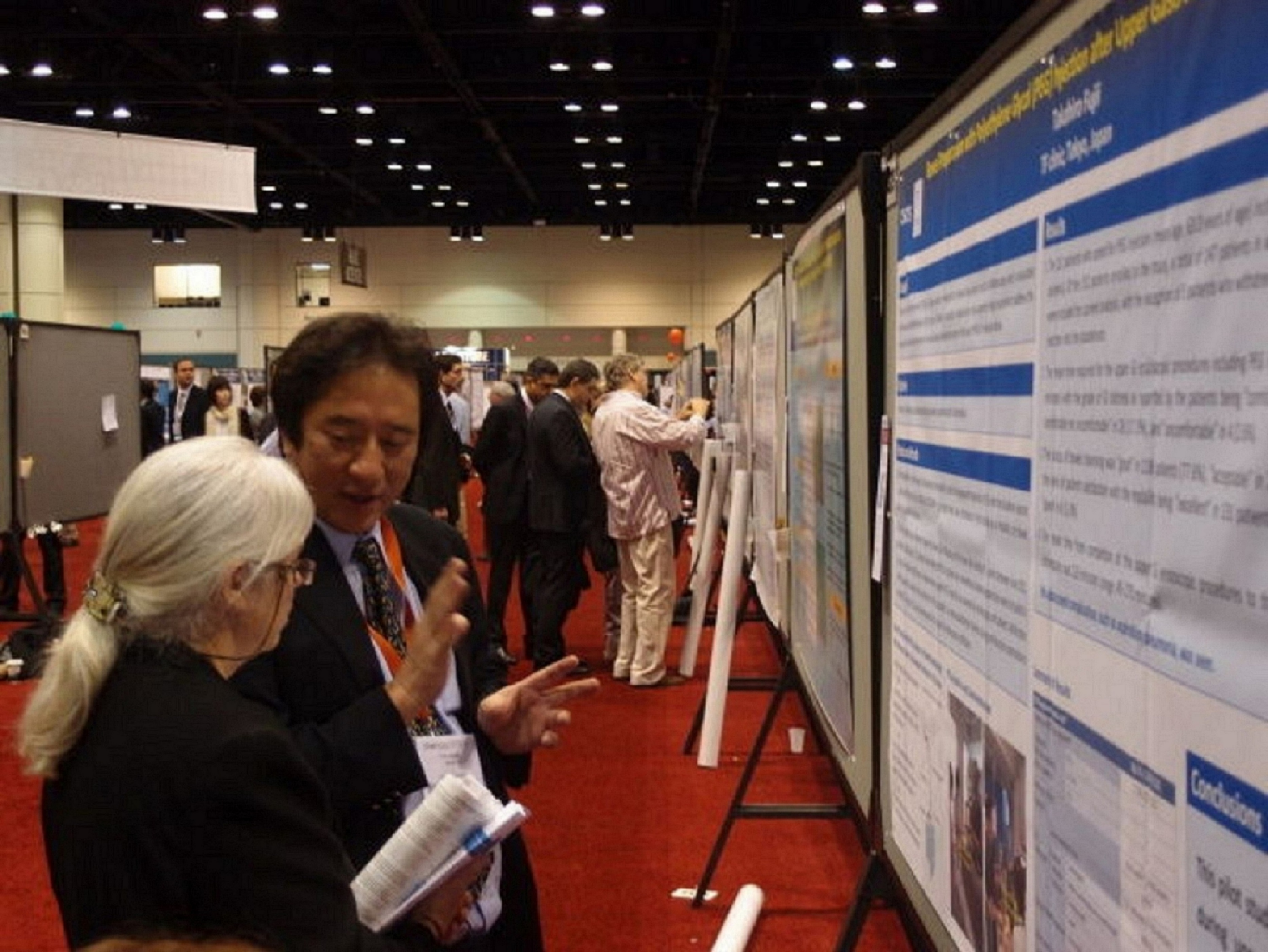
Parameter	PEG Injection (n=56)	PEG Solution (n=56)
Mean time for upper GI endoscopy (min)	23	23
Mean time from upper GI endoscopy to colonoscopy (min)	120	120
Grade of GI cleanliness (BBPS)		
Satisfactory	82%	82%
Unsatisfactory	18%	18%
Unacceptable	0%	0%
Grade of patient satisfaction		
Satisfactory	99%	99%
Good	0%	0%

**Conclusions**

This pilot study showed that using upper GI endoscopic water and lower GI endoscopic PEG injection can be performed on-site. It is convenient, feasible, and safe. A prospective comparative study is planned to prove the usefulness of the method over conventional PEG solution preparation.







**Posterior and Anterior PFC Resection after Upper Limb**  
Takahashi, Japan

**Methods**

In 2 cases with post-15 years post-op. 20 cases of upper limb amputation. The 20 cases were divided into 10 patients with anterior PFC resection and 10 patients with posterior PFC resection.

The main reason for the operation was postoperative PFC resection with the goal of 2 cases in which the patients being "satisfied" and "unsatisfied" (2/10, 20%) and "unsatisfied" (8/10, 80%).

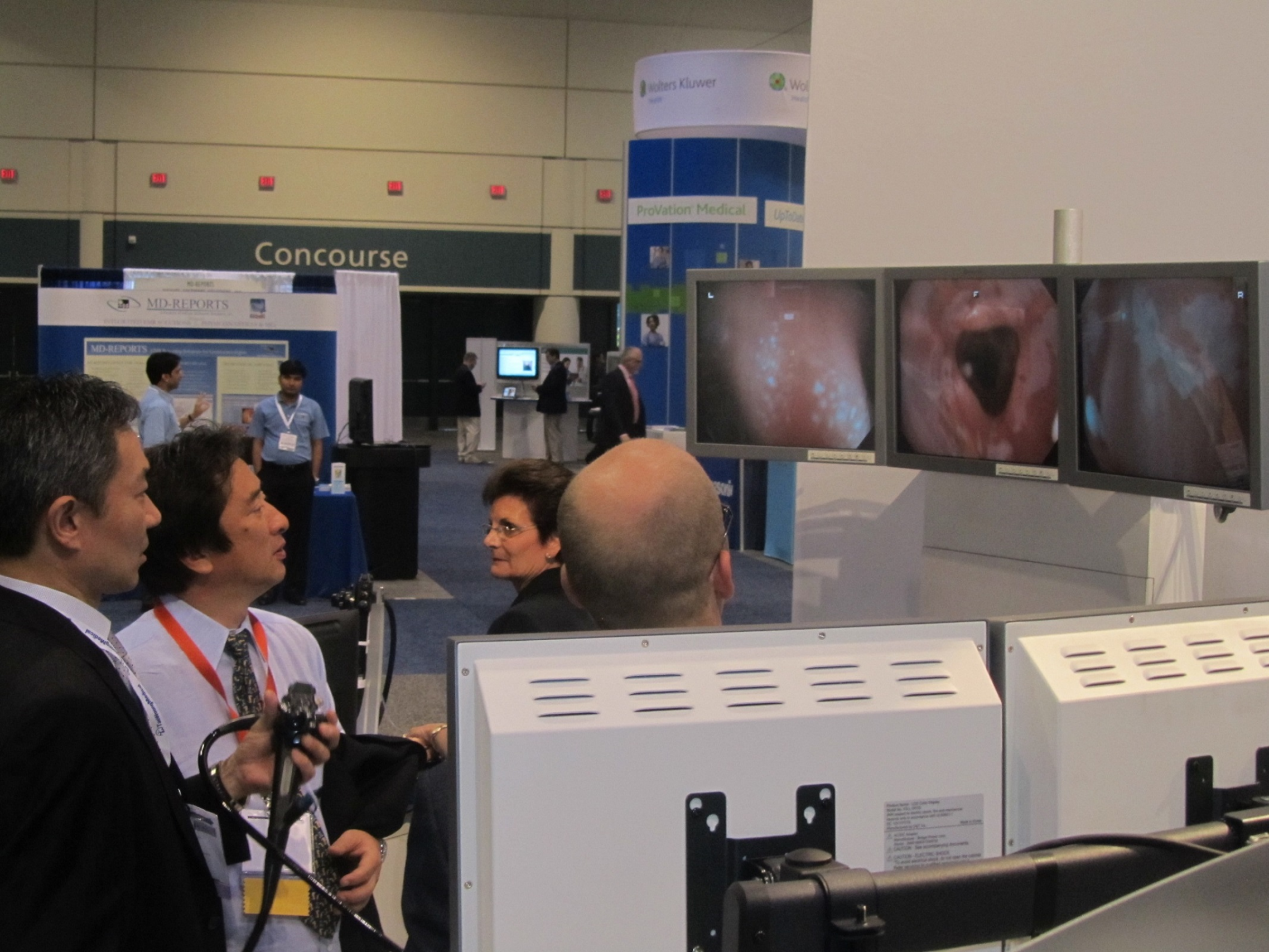
The cases of those having no "pain" in 20 cases (77%), "increased" in 10 cases of pain intensity and the results being "satisfied" in 20 patients (100%).

On the other hand, the number of the cases of postoperative resection to the anterior and posterior PFC resection was 4/10 cases.

It is concluded that a superior resection was more

**Conclusions**

This pilot study during the



Concourse

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