ADDITIONAL STENTING IS EFFECTIVE AND SAFE FOR OCCLUSION OF SELF-EXPANDABLE METALLIC STENT PLACED FOR PALLIATION OF MALIGNANT LARGE BOWEL OBSTRUCTION

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Introduction

- Self-expandable metallic stent (SEMS) is widely used in endoscopic intervention for bridge to surgery or palliation of malignant large bowel obstruction.
- However, obstruction of SEMS is one of common problems in palliative cases.
- Additional stenting is performed in such cases, but few data on its safety and efficacy are available.
- In this study, we aimed to clarify current status of SEMS obstruction and to evaluate the safety and efficacy of additional stenting.

Methods

- We retrospectively reviewed medical records of 31 patients with malignant large bowel obstruction who had undergone SEMS placement for palliation from May 2013 to October 2018 in Kurashiki Central Hospital.
- SEMS was used uncovered WallFlex™ colonic Stent (Boston Scientific, USA) or Niti-S™ (Tae Woong Medical, Korea).

Results

Table1: Patient characteristics

	Total(N =31)
Age	83 ± 13
Sex, female	10 (32%)
Performance status	2 ± 1.2
CCI *	6.25 ± 0.5
Primary cancer site	
Colorectal cancer	25 (80.6%)
Gastric cancer	3 (9.7%)
Pancreatic cancer	2 (6.5%)
Ovarian cancer	1 (3.2%)
Location of obstruction	
Left side of colon	21 (67.7%)
Right side of colon	10 (32.2%)

*CCI : Charlson comorbidity index
Continuous variables are expressed as mean ±SD.

Table3: Univariate analysis of the risk of SEMS obstruction

	N=31	Yes(N=7)	No(N=24)	P value
Length of obstruction (mm)		40 (10-80)	30(10-80)	0.212
Age		84(53-88)	82(44-97)	0.67
PS		2(1-3)	2(0-4)	0.471
CCI		6(3-9)	6(1-9)	0.572
Alb (g/dL)		3.2(2.5-3.5)	2.55(1.3-4.2)	0.064
ΔCRP (mg/dL)		2.2(-0.5-5.95)	0.37(-7.18-11.9)	0.524
Left side colon obstruction		3/7	18/24	0.172
Colorectal cancer		5/7	20/24	0.596
Length of obstruction		40(10-80)	30(10-80)	0.212

Categorical variables were tested by Fisher's exact test and continuous variables were tested by Mann-Whitney U test. Statistical significance was determined a priori at P ≤ 0.05.

Table2: Outcome of initial SEMS insertion

	Total(N=31)
Technical success	30(96.7%)
Clinical success	26(87.1%)
Resume oral intake, days	2 ± 1.6
CROSS* pre/post	0 ± 1.2 / 4 ± 1.1
Adverse event	
Re-obstruction	7(22.7%)
Perforation	2(6.4%)
Follow up period, days	116.0(5-689)
Interval to stent occlusion, days	91 ± 18.1

CROSS: Colorectal obstruction scoring system
Continuous variables are expressed as mean ±SD

Table4 : Outcomes of additional SEMS stenting

	Total(N=5)
Technical success	5(100%)
Clinical success	4(80%)
CROSS pre/post	0 ± 0.89 / 4 ± 1.2
Adverse event	0
Discharged while alive	4(80%)
Interval of re-intervention to death, days	89 ± 46.5

Figure: Overall survival

*Overall survival probability was evaluated using Kaplan-Meier analysis and was compared using the log-rank method.

Conclusion

- Obstruction of SEMS inserted for malignant large bowel obstruction occurred in about 20% after around 3 months after stenting.
- Additional SEMS stenting appeared to be safe and effective to manage the stent obstruction.