Influence of different guidelines on actual practices for SSI prevention in hospitals

Yuhei Saito, Satoshi Murakoshi, Takami Komatsu,Kazuhiko Fukatsu,
Yushi Uetera, Hiroshi Yasuhara
The University of Tokyo Hospital Tokyo, Japan

Introduction

- Guidelines for the prevention of surgical site infection (SSI) have played an important role in decreasing the incidence of SSI. Three guidelines are currently available in Japan, and hospitals can adopt any types of practices recommended by these different guidelines (GLs), which may influence the incidence of SSI in each hospital. This study examined the influence of guideline recommendations on the actual practices carried out in hospitals.

Methods

Study design : Structured questionnaire survey

Study period : 26th October 2012 – 31st January 2013

Subject : Japanese hospitals with > 250 beds

Two questionnaire forms were sent to each hospital so that they were answered by persons in charge of both OR department and surgical ward.

Questionnaire :

1. Feature of respondents:
   - Department
   - Occupation
   - Responsibility
   - Recognition of guidelines

2. Perioperative practice for SSI prevention in GLs:

Preoperative management
- Patient conditions
- Antibiotic prophylaxis
- Surgical hand hygiene
- Preoperative skin preparation
- Sterilization and asepsis of SI*
- Attire

Intraoperative management
- Surgical maneuvers
- Patient conditions
- Air conditions in OR

Postoperative management
- Wound management in wards
- Air conditions in wards

Infection Prevention strategy
- Standard precaution
- Cleaning of OR and wards
- Staff education
- Isolation policy for infected staffs
- SSI surveillance.

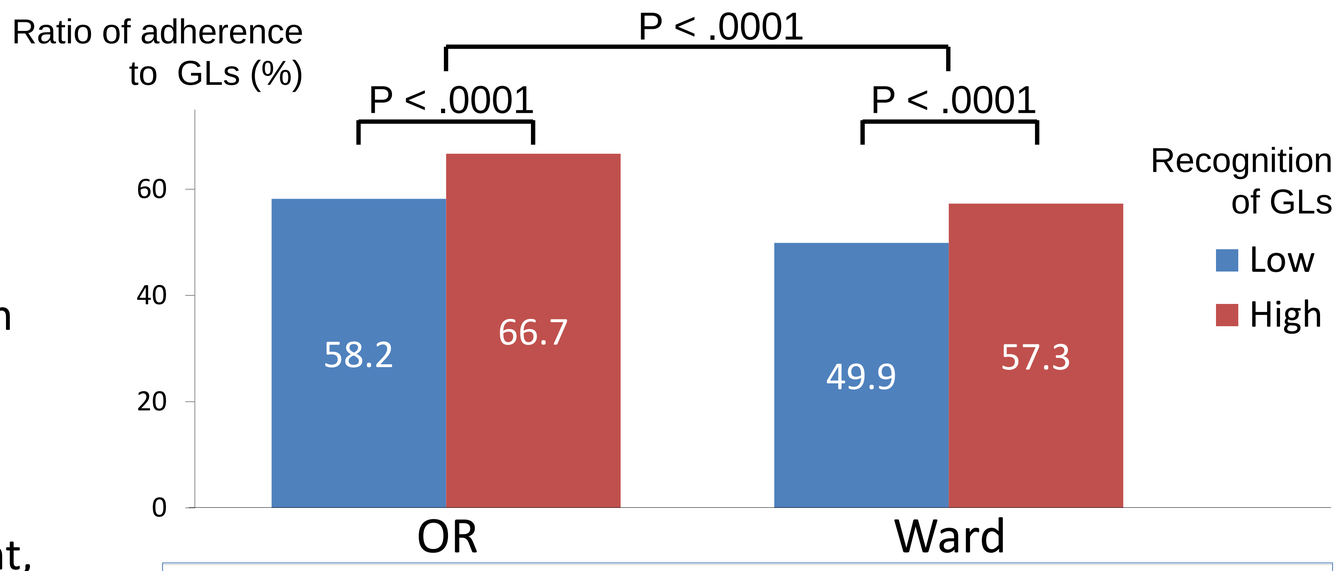
(* SI: surgical instruments)

SSI guidelines :

1. Practical guidelines of perioperative care
   (Japanese Association for Operative Medicine,2008)
2. Guidelines for prevention of SSI
   (Centers for Disease Control and Prevention, 1999)
3. WHO guidelines for safe surgery 2009: Objective 7
   (World Health Organizaiton,2009)

Results

- A total of 713 answered questionnaires were collected from 312 surgical wards, 388 OR departments and 13 unidentified departments of 453 hospitals (50.0%).
- Ratio of adherence to GLs in OR was higher than that in wards, and was higher in the groups who have better recognition of GLs (**Fig.1**).
- Multivariate analysis indicated that the degree of recognition of the guidelines, as well as the department, was a significant factor influencing the ratio of adherence to the GLs (**Table1**).



Ratio of adherence to GLs = Number of practices adopted in the hospital of the respondent / Number of practices recommended in the GLs

Fig.1. Ratio of adherence to guideline recommendations

Table1. Ratio of adherence according to factors

Variables		N	Ratio of adherence (CI)	P** value
Department	OR	378	65.6 (51.6-54.7)	<.0001
	Ward	302	53.1 (64.2-67.0)	
Occupation	Doctor	70	66.7 (63.2-70.2)	.1199
	Nurse	583	59.1 (58.0-60.4)	
	Others	27	62.7 (57.1-68.3)	
Responsibility	Director/Chief	489	59.5 (58.2-60.9)	.4800
	Others	191	61.5 (59.4-63.7)	
Recognition of GLs	High	464	64.0 (62.7-653)	<.0001
	Low	216	51.8 (49.9-53.6)	

CI: Confidence interval. *: Multiple regression analysis.

Discussion

- The recognition of GLs serves to improve the practice for SSI prevention which will decrease the incidence of SSI.
- It is important to use GLs in routine practice and staff education which promote the recognition of the GLs and accordingly to achieve higher ratio of adherence to practice for SSI prevention recommended in GLs.

Conclusion

- Our results demonstrate that promotion of the recognition of the guidelines, as well as refinement of the guidelines, may be effective to improve the incidence of SSI.