

**1016. Surgical Site Infection Risk Stratification for Kidney Surgery: Use of Endoscopy as an Effect Modifier**

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**Background.** Risk factors of surgical site infection (SSI) for kidney surgery have not been determined yet because the number of procedures is not enough. To estimate the risk and find the risk factors of SSI for kidney surgery, the Japan Nosocomial Infections Surveillance (JANIS) SSI division, which is a voluntary based, national-level surveillance in Japan, was analyzed.

**Methods.** Logistic regression analysis using data on kidney surgery in the JANIS SSI division database from January 1, 2008 to December 31, 2010, was conducted separately for procedures with and without the use of endoscopy.

**Results.** A total of 1819 procedures of kidney surgery were analyzed. Twelve cases of SSI occurred in 837 endoscopic surgeries (1.4%), and 17 cases of SSI occurred in 982 open surgeries (1.7%). Associations between SSI incidence and age, wound class, and American Society of Anesthesiology (ASA) score differed according to whether endoscopy was used. For endoscopic surgery, age (adjusted odds ratio (AOR), 1.07 [95 percent confidence interval (95% CI), 1.00–1.14];  $P = 0.04$ ) and duration of surgery (AOR, 1.01 [95% CI, 1.00–1.01];  $P = 0.02$ ) were associated with SSI. For open surgery, wound class other than clean (AOR, 4.82 [95% CI, 1.07–21.59];  $P = 0.01$ ) and ASA score  $\geq 3$  (AOR, 4.28 [95% CI, 1.51–12.15];  $P = 0.01$ ) were associated with SSI.

Logistic regression analysis of factors associated with surgical site infection with kidney surgery, JANIS, 2008–2010

Risk factor	Endoscopic surgery (n = 837)			Open surgery (n = 982)		
	AOR	95%CI	P value	AOR	95%CI	P value
Age	1.07	1.00–1.14	0.04	0.99	0.96–1.02	0.47
Sex						
Male	ref.			ref.		
Female	0.69	0.18–2.66	0.59	1.00	0.35–2.83	1.00
Wound class						
C	ref.			ref.		
CC, CO, or D	0.68	0.20–2.30	0.54	4.82	1.07–21.59	0.04
ASA score						
1, 2	ref.			ref.		
3, 4, 5	2.06	0.53–8.05	0.30	4.28	1.51–12.15	0.01
Duration of surgery	1.01	1.00–1.01	0.02	1.00	1.00–1.01	0.06
Combined surgery						
No	ref.			ref.		
Yes	1.38	0.26–7.28	0.71	2.12	0.53–8.53	0.29

NOTE. AOR, Adjusted odds ratio; ASA, American Society of Anesthesiology; JANIS, Japan Nosocomial Infections Surveillance; 95%CI: 95 percent confidence interval; C: clean, CC: clean-contaminated, CO: contaminated, D: dirty.

**Conclusion.** Since the risk factors for SSI differed between endoscopic and open kidney surgery, they should be analyzed separately when predicting the risk of SSI.

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