

Assessment of Surgical Site Infection Control, Khartoum Locality

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Abstract: An infection control program is a necessary part of efforts to reduce rate of infection in hospitals. Infections can be contracted during operations and labor cases or in medical staff in this not application to precautions control.

This study was done in (12) hospitals in Khartoum locality (private and government) to assess the surgical site infection control procedure. The sample size randomly chosen (325) persons by proportion of medical staff in these hospitals. The data collected by questionnaires and interview in private and government hospitals.

The study showed that (73.3%) of the private hospitals had of a policy of infection control and (26.7%) did not, and (50.6%) of the government hospitals had a policy of infection control and (49.4%) did not.

By contrast (71.7%) of the private hospitals had committee of infection control and just (38.8%) of the government hospitals had committee of infection control.

Only (5%) of the private hospital did not exist central sterilization room, vice versa (48.2%) of the government hospitals did not exist central sterilization room.

The study recommended the health authorities in Khartoum State to enhance the infection control in all hospitals in order to reduce the magnitude of hospitals acquired infection.

Keywords: Surgical Site Infection Control, hospitals in Khartoum locality.

1. INTRODUCTION

A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place. Surgical site infections can sometimes be superficial infections involving the skin only. Other surgical site infections are more serious and can involve tissues under the skin, organs, or implanted material. CDC provides guidelines and tools to the healthcare community to help end surgical site infections and resources to help the public understand these infections and take measures to safeguard their own health when possible.⁽¹⁾

Surgical site infections have been shown to compose up to 20% of all healthcare-associated infections. At least 5% of patients undergoing a surgical procedure develop a surgical site infection⁽²⁾

A prevalence survey undertaken in 2006 suggested that approximately 8% of patients in hospital in the UK have hospital acquired infection and surgical site infection (SSI) accounted for 14% of these infections and nearly 5% of patients who had undergone a surgical procedure were found to have developed an (SSI). However, prevalence studies tend to underestimate SSI because many of these infections occur after the patient has been discharged from hospital.⁽³⁾

Infection control addresses factors related to the spread of infections within the healthcare setting (whether patient-to-patient, from patients to staff and from staff to patients, or among-staff), including prevention (via hand hygiene/hand washing, cleaning/disinfection/sterilization, vaccination, surveillance), monitoring/investigation of demonstrated or suspected spread of infection within a particular health-care setting (surveillance and outbreak investigation), and management (interruption of outbreaks). It is on this basis that the common title being adopted within health care is "infection prevention and control."⁽⁴⁾

Surgical site infections (SSI) continue to be a significant problem in surgery. The American College of Surgeons-National Surgical Quality Improvement Program (ACS-NSQIP) Best Practices Initiative compared process and structural characteristics among 117 private sector hospitals in an effort to define best practices aimed at preventing SSI.⁽⁵⁾

Our study aimed to assess the surgical site infection control in Khartoum locality hospitals its policies, application of standard precaution, and the awareness of medical staff.

2. MATERIAL AND METHODS

Study design:

This study was a descriptive cross-sectional hospitals based.

The research was conducted in Khartoum locality, the total hospitals in Khartoum locality (65) hospitals of which (48) private and (17) government.

Study population:

Study population comprised all medical staff in private and government hospitals in Khartoum locality, the sample size comprised 12 hospitals (9) private and (3) government according to its proportion. Also included (325) persons. The private hospitals represented 74% and government 26% according to the total number of hospitals. The sampled medical staff in private hospital (240) and the remainder (85) from medical staff in government hospital.

Data collection:

The data collected through questionnaires and observation.

Data analysis:

Data analyzed manually and by Statistical package for social science (SPSS) computer programmer then presented in tables. We use 95 percent confidence degree in order to interpret the findings.

3. RESULTS

Table (1) distribution infection control policy by type of hospitals

Type of hospital	Frequency		Percent	
	Yes	No	Yes	No
Private	176	64	73.3	26.7
Government	43	42	50.6	49.4
Total	325		100%	

Table (2) distribution infection control committee by type of hospitals

Type of hospital	Frequency		Percent	
	Yes	No	Yes	No
Private	172	68	71.7	28.3
Government	33	52	38.8	61.2

Table (3) showed distribution tools for drying hands by type of hospitals

Type of hospital	Frequency		Percent	
	Yes	No	Yes	No
Private	173	67	72	28
Government	1	84	1.2	98.8
Total	325		100%	

Table (4) showed distribution Aprons sterile immediate disposal by type of hospitals

Type of hospital	Frequency			Percent		
	Found	Not found	Not enough	Found	Not found	Not enough
Private	191	40	9	79.6	16.7	3.8
Government	3	81	1	3.5	95.3	1.2
Total			325			100%

Table (5) Storage of medical waste by type of hospital

Type of hospital	Frequency		Percent	
	found	Not found	Found	Not found
Private	230	10	95.8	4.2
Government	12	73	14.1	85.9
Total		325		100%

Table (6) distribution of autoclave for medical waste by type of hospital

Type of hospital	Frequency		Percent	
	found	Not found	Found	Not found
Private	12	162	32.5	67.5
Government	0	85	0	100
Total		325		100%

Table (7) Specific destination for incineration for medical waste

Type of hospital	Frequency		Percent	
	found	Not found	Found	Not found
Private	224	16	93.3	6.7
Government	27	58	31.8	68.2
Total		325		100%

Table (8) sterilization of instruments after each operation by type of hospital

Type of hospital	Frequency		Percent	
	Yes	No	Yes	No
Private	215	25	89.6	10.4
Government	64	21	75.3	24.7
Total		325		100%

Table (9) the existence of central sterilization room separated from the operating rooms

Type of hospital	Frequency		Percent	
	Yes	No	Yes	No
Private	208	32	86.7	13.3
Government	37	48	43.5	56.5
Total		325		100%

4. DISCUSSION

Surgical site infections (SSIs) are defined as infections occurring up to 30 days after surgery (or up to one year after surgery in patients receiving implants) and affecting either the incision or deep tissue at the operation site. Despite improvements in prevention, SSIs remain a significant clinical problem as they are associated with substantial mortality and morbidity and impose severe demands on healthcare resources. The incidence of SSIs may be as high as 20%, depending on the surgical procedure, the surveillance criteria used, and the quality of data collection studies have shown that most hospitals in developing countries especially Africa, have no effective infection control programmer to reduce surgical site infection due to lack of awareness of the problem, lack of personnel protect equipments, poor water supply, erratic electricity supply, ineffective antibiotic policies with emergence of multiply antibiotic resistant microbes, poor

laboratory backup, poor funding and non-adherence to safe practices by health workers. It is recommended that the cost of hospital infection control programmer should be included in the health budget of the country and fund allocated for the infection control committee for routine control purposes and to bear the cost of outbreaks. There is need for adequate staffing and continuous education of staff on the principles of infection control, especially hand washing which is the single most important effective measure to reduce the risks of cross infection.

Our studies showed that most hospitals in Khartoum locality have not effective infection control programmer due to lack of application infection control stander precautions and poor funding and non-adherence to safe practices specialized in government hospitals.

Percentage of exist infection control policy program in private hospital 73.3% and not 26.7% by contrast in government hospital percentage of exist infection control policy programmer represented 50.6% and not about 49.4%, and infection control committee exist in private hospitals represented 71.7% and not 28.3% as in government hospitals exist infection control committee 38.8% and not about 61.2%, we can say that the differences were statistical with p value less than 0.05 according to confidence used.

Percentage of availability of disinfected material in private hospital (93.8%) and not available was (6.2%). As in government available of materials represented (44.7%) and not available (55.3%). We can conclude that the differences were statistical with p value less than 0.05 according to confidence used.

Our study concluded that lacking of infection control policy and infection control committee in some private hospitals and absence of that in government hospitals. Also we recommended the health authorities to enhance the measures of infection control.

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