Surgical site infection (SSI) is the most frequent type of health care-associated infection (HAI) in low- and middle-income countries, LMICs,1 (68% of the world’s countries). According to WHO reports, approximately 1 in 10 people who have surgery in LMICs acquire SSIs. In addition to the risk and discomfort for the patient, SSIs dramatically increase the direct and indirect cost of treatment and reduce health-related quality of life.2

Low- and middle-income countries

When compared to the International Nosocomial Infection Control Consortium data, SSI rates in Mexico were significantly higher in 73% of the analyzed surgical procedures.3

This may result from the typical hospital situation in limited-resource countries where there is often a lack of standard procedures, local differences in guidelines and poor infrastructure.4,5

Surgical instruments pose risk of contamination

Surgical instruments could act as fomites for the pathogens of surgical site infection even if the surgical field is not evidently contaminated.6

The avoidance of SSIs protects patients from serious complications

The average SSI leads to approximately 1 week of additional hospitalization and increases the risk of death 2–11-fold compared to uninfected surgical patients.7

In a recent meta-analysis report of 220 international studies investigating SSI rates in developing countries (or LMICs):

- Pooled cumulative incidence was 11.8 per 100 patients in low- and middle-income countries8

Compared to:

- 2.6 per 100 surgical procedures in the US (cumulative incidence of SSIs)9
- 1.6 per 100 surgical procedures in Germany10

SSIs can be caused by the following factors:

- Procedure-related factors promoting SSIs: surgery duration, technique, quality of preoperative skin preparation, inadequate sterilization of surgical instruments, duration of surgical scrub, preoperative shaving, antimicrobial prophylaxis, operation room ventilation, poor hemostasis, use of surgical drains, foreign material in the surgical site, tissue trauma.

The prevalence of SSIs varies according to type of procedure, the cause of the SSI, and the location. An effective SSI surveillance program is fundamental in defining the current SSI rate and the risk factors associated with SSIs. Infection Control and Hospital Epidemiology 2013; 34(6): 597–604.

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