

Prophylactic Antibiotic: Is It Effective In Preventing Post-Surgical Infection?

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Post-surgical infection is a common healthcare problem that may lead to hospitalization for a prolonged period. Early recognition of signs and symptoms is a prerequisite for reducing the instances of surgical site infections. Before bothering to know which post-surgical measures can help prevent infection, the pre and perioperative periods are equally important. Surgical site infection prevention starts at the pre-operative stage. Studies on post-surgical infection indicate that antibiotics can help prevent infections (Gyssens, 1999). Patients that record surgical wound infections may have to consume more antibiotics spend more on health care; suffer from pain, and in some cases, they die (Asif, Mirza & Saeed, 2017).

Population

All groups of people, notwithstanding their age, are at an increased level of infection if they undergo surgery. Surgery exposes the internal parts of the body to the external environment, one which they are not well equipped to handle. Due to the increased risk of contracting infections, surgeries need to adhere to the highest possible levels of hygiene. However, not all surgeries require prophylactic antibiotics; application of such measures is unnecessary for clean surgeries.

Intervention

While conducting surgery, studies indicate that the use of prophylactic antibiotics may help reduce the chances of contracting surgical wound infection during the post-surgery period. Patients with wounds during a surgical procedure are more disposed to contracting infections as compared to those that had no wounds before surgical incision (Hegde, 2013).

Surgery is a detailed experience; the use of prophylactic antibiotics is not a guarantee that there would be no surgical wound infections. Prophylactic antibiotics are just a measure that can

significantly reduce the chances of one getting infected on the surgical site. The use of prophylactic antibiotic is meant to ward off opportunistic infections. First generation cephalosporins are the preferred prophylactic antibiotics; the use of third-generation cephalosporins does not translate well to a majority of surgeries. When first and third generation cephalosporins get compared, the first generation category has a spectrum of activity able to counter organisms present in everyday surgical encounters (Hegde, 2013).

Wholesale usage of prophylactic antibiotics on surgeries does not yield desired results (Elbur et al., 2013). Optimal prophylactic antibiotics performance occurs when the drugs get administered between fifteen minutes and one hour before surgery. The use of prophylactic antibiotic past the one hour period is not permissible where the surgery lasts for more than three hours; however, the efficacy of such does not show up in literature. Preoperative prophylactic antibiotics may help prevent post-surgical infections (Elbur et al., 2013).

There are chances of prophylactic antibiotics misuse, they include but not limited to wrong timing on the application and use on clean neck surgeries that have a low risk of infection (Elbur et al., 2013). Prophylactic antibiotics should only get administered to the patient between fifteen and sixty minutes before surgery. Use of prophylactic antibiotics beyond twenty-four hours after surgery poses an independent risk that may lead to surgical site infection. Since not all surgeries can be clean, regulated use of prophylactic antibiotics is mandatory. Postoperative use of prophylactic antibiotics should only occur if the patient had an infection before the surgery; also the use of prophylactic antibiotics during the operation should only occur if the patient has lost more than one and a half liters of blood (Hegde, 2013).

Compare

It is not a must that prophylactic antibiotics get administered to all surgeries. In a cohort study where women who underwent clean surgeries received 2 g of cefazolin before surgery, and the other group went through the surgery without prophylactic antibiotics, there were no post-operative infections found for the two groups of women (Hasan et al., 2013). Prophylactic antibiotics have made healthcare providers lazy to take all the necessary preoperative procedures by over depending on the drugs. Surgeries should get conducted in clean environments, the presence of prophylactic antibiotics should only act as an addition to the steps of ensuring a clean environment as opposed to being the only measure (Asif, Mirza & Saeed, 2017). Some of the steps that nurses can take when preparing a patient for clean surgery are preoperative showering to remove bacteria from the skin, hair removal when necessary should be done with clippers to avoid breaking the skin, and skin preparation should be done in theater using an antiseptic. Lastly, the hands of nurses giving care to the patient should get disinfected (Harrington, 2014).

Outcome

Use of prophylactic antibiotics when necessary in a clean theater with high levels of hygiene for the patient and the healthcare providers would help avert post-surgical infections (Hasan et al., 2013). In cases of planned surgeries, the patients should stop smoking one month before the procedure. Smoking prevents wound healing as it leads to vessel constriction thus reduced oxygen and nutrients supply to the surgical site. Also, before surgery, patients should take a shower to reduce bacterial load from the skin, if unable to do it themselves, the care providers should help.

Time

Prophylactic antibiotics usage should only happen in the preoperative period and only when necessary during the surgery. Prophylactic antibiotics should not get administered to a

patient beyond one day after surgery. All suggested measures target the preoperative stage since that is where surgeries go wrongs as far as post-surgical infection is the concern.

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