Current Trends in Gynecologic Oncology

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Skin Antiseptic Agents during Cesarean Delivery: A Randomized Trial

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Commentary

Preoperative skin antisepsis has the potential to decrease the chance of surgical-site infection. However, proof is proscribed to guide the selection of antiseptic agent at abdominal delivery, that is that the commonest major operation among ladies within the US.

In this single-center, randomized, controlled trial, we have a tendency to evaluated whether or not the utilization of chlorhexidine–alcohol for operative skin antisepsis was superior to the utilization of iodine–alcohol for the prevention of surgical-site infection when abdominal delivery. We have a tendency to haphazardly allotted patients undergoing abdominal delivery to skin preparation with either chlorhexidine–alcohol or iodine–alcohol. The first outcome was superficial or deep surgical-site infection inside 30 days when abdominal delivery, on the idea of definitions from the Centers for Disease Control and Prevention.

Cesarean delivery is that the commonest major operation among ladies within the US. In 2013, quite 32.7% (1.3 million) of the 3.9 million births were by caesarean section. Surgical-site infections complicate 2 to 5% of all surgical procedures and 5 to 12% cesarean deliveries. Infection occurring when delivery places an additional burden on the new mother and should impair mother–infant bonding and breast-feeding [1]. The typical attributable hospital price per surgical-site infection when abdominal delivery is calculable to be $3,529.

The skin could be a major supply of pathogens that cause surgical-site infections. Therefore, operative skin antisepsis has the potential to decrease the chance of surgical-site infection. Sadly, there's a scarcity of proof to guide the selection of antiseptic agent at abdominal delivery. Three tiny trials, involving a complete of 189 participants, are revealed comparison antiseptic agents for operative skin preparation at cesarean delivery; these trials showed no important between-group variations within the rate of surgical-site infection. Moreover, knowledge from empiric studies square measure conflicting [2]. The present pointers on ways to forestall surgical-site infection suggest the utilization of Associate in nursing alcohol-containing operative skin-preparatory agent, however they note that the foremost effective disinfectant to mix with alcohol is unclear.

Patients were randomly allotted to operative skin antisepsis with chlorhexidine–alcohol or iodine–alcohol in a very pragmatic trial to work out the comparative effectiveness of the two operative skin preparations for the bar of surgical-site infection when abdominal delivery. We have a tendency to used broad inclusion criteria and routine clinical procedures, and that we analyzed outcomes in step with the intention-to-treat principle.\The full trial protocol is out there with the complete text of this text at NEJM.org.

All the participants provided written consent. Pregnant ladies undergoing abdominal delivery at Washington University heart in St. Joe Louis from September 2011 through June 2015 were eligible. we have a tendency to excluded ladies United Nations agency had familiar allergic reaction to antiseptic, alcohol, iodine, or shellfish or United Nations agency had a skin infection adjacent to the operative website [3].

Skin preparation was performed by the current nurse following the manufacturer's directions that were similar for the two antiseptic agents. In brief, the packaged antiseptic applier was opened and wont to scrub the operative website [4]. A wait time of 3 minutes was allowed between the appliance of the antiseptic agent and skin incision except in emergency cases within which this step was skipped. Patients conjointly received customary infection-prevention measures, as well as body weight–based operative antibiotic prophylaxis

The primary outcome was superficial or deep surgical-site infection inside 30 days when abdominal delivery, on the idea of the National care Safety Network definitions of the Centers for illness management and bar (CDC) (see the Supplementary Appendix, offered at NEJM.org). The designation was created by the treating doc and verified by means that of chart review by the scientist, United Nations agency was unaware of the study-group assignments. Prespecified secondary outcomes were length of hospital keep, doc workplace visits and hospital readmissions for infection-related complications, rubor, positive wound culture, skin irritation, and hypersensitive reaction. We have a tendency to conjointly assessed, post hoc, alternative wound complications (including skin separation, seroma, hematoma, and cellulitis), emergency department visits for wound complications, further wound surgery, use of home health services or services of a wound clinic, and period of wound care [5].

In this irregular, controlled trial, we have a tendency to found that the chance of surgical-site infection when abdominal delivery was considerably lower once chlorhexidine–alcohol was used for operative skin preparation than once iodine–alcohol was used. The rates of surgical-site infection were low overall, and also the absolute distinction between teams was comparatively modest.

In addition, patients United Nations agencies were allotted to chlorhexidine–alcohol were considerably less possible than people who were allotted to iodine–alcohol to own doc workplace visits for wound complications. The length of hospital keep and also the rates of hospital admittance for infection-related complications, rubor, and adverse skin reactions were similar within the two teams, as were the rates of alternative wound complications.

Second, the dearth of dazzling among the participants and suppliers may probably have introduced bias. However, any such bias would be expected to be no directional. Moreover, we have a tendency to used similar customary skin-preparation procedures for the patients within

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the two teams. we have a tendency to used active police work, as well as phone phone calls, to attenuate loss to follow-up and to trace the incidence of surgical-site infection; now is very important as a result of most infections when abdominal delivery occur when discharge from the hospital. We have a tendency to reviewed medical records in a very blind fashion to verify the first outcome and used the agency National care Safety Network definitions to confirm objective ascertainment.

In conclusion, this irregular, controlled trial showed that the utilization of chlorhexidine–alcohol for operative skin antisepsis at abdominal delivery was related to a considerably lower risk of surgical-site infection than was the utilization of iodine–alcohol.

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Conflict of Interest

None

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