

Inexpensive rinsing effective at reducing postop infection following joint replacement surgery

February 17 2011

A rinsing technique with betadine that costs just a little over one dollar per patient may significantly reduce the infection rate following total knee and hip joint replacement surgery according to a study by researchers at Rush University Medical Center.

The study, presented at the American Association of Orthopedic Surgeons 2011 Annual Meeting, found that a three minute diluted betadine lavage combined with painting of the skin with a 10% betadine solution prior to surgical closure nearly eliminated early deep postoperative infection.

Deep periprosthetic joint infection is a rare but devastating complication associated with total joint replacement. Despite aseptic techniques, careful skin preparation and prophylactic antibiotics, deep infections still occur with a prevalence ranging from 0.3% to 1.9%.

Previous research has shown that a diluted betadine lavage of the surgical wound prior to closure reduces the rate of post-operative infection in orthopedic, urologic, cardiovascular and general surgery but it has not been previously studied in total joint arthroplasty.

"Betadine is safe, inexpensive, simple to use, and readily available within most operating rooms," said study author Dr. Craig Della Valle, associate professor of <u>orthopedic surgery</u> at Rush. "In addition, betadine is



effective on many types of bacteria including methicillin-resistant Staphylococcus Aureus (MRSA).

Researchers implemented a protocol for primary total knee and total hip arthroplasty in which the wound is soaked with the diluted betadine solution for three minutes following implantation of the prosthetic components. This is followed by a pulsating lavage of normal saline without antibiotics. Prior to final closure, betadine is applied to the skin surrounding the incision. Prior to this protocol, wounds were lavaged with normal saline only.

Acute post-operative deep infection was diagnosed in 18 out of the 1862 cases performed prior to the initiation of the betadine lavage protocol and in only one of the 688 total joint arthroplasties following initiation of this protocol; a reduction of the infection rate from 0.97% to 0.15%. There were no side complications associated with the treatment.

The study authors caution there are some limitations to the study. Changes in the surgeon's technique occurred over the time of the study, and it was not feasible to determine the impact of these changes on the rate of <u>infection</u>. These included variations in the incision size, suture material, and type of skin sealant.

Provided by Rush University Medical Center

Citation: Inexpensive rinsing effective at reducing post-op infection following joint replacement surgery (2011, February 17) retrieved 28 April 2024 from <u>https://medicalxpress.com/news/2011-02-inexpensive-effective-post-op-infection-joint.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.