

SOLUDINE FOR PRE-OPERATIVE SKIN PREPARATION

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SUMMARY

Aqueous solutions of Iodine is germicidal, cheap and easily available.

A study of 100 cases, to find out effectiveness of Soludine 1% W/V, to render sterile skin of operation area (abdominal) was carried out in the department of Obstetrics and Gynaecology of Dr. V. M. Medical College, Solapur.

Cultures obtained from abdominal skin prior to application of soludine were positive in 53 out of 100 cases.

Most common organisms found were staphylococcus coagulase positive in 22 out of 53 cases and citrobactor in 13 cases.

In all 53 cases repeat cultures, 3-4 hours after application of soludine were sterile, and none of the patients developed post-operative wound infection. Soludine was found non-irritant.

Introduction

Iodine is the oldest known antiseptic. Elemental Iodine is an active germicide. The exact mode of bactericidal action is however not known. A dilution of 1 in 200000 can destroy all bacteria within 15 minutes. It is also fungicidal, amaebicidal.

It is water soluble in presence of iodine salts and aqueous solutions are germicidal.

Aqueous solution of Iodine is less irritant than tinctures. It is easily available, economic, effective and less toxic to tissues.

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Material and Methods

Soludine 1% w/v supplied by Unichem Laboratories, Bombay was used for the study.

3 to 4 hours prior to operation, abdominal skin of operation area was shaved, cleansed with soap and water and allowed to dry. A swab was taken from the abdominal skin for the culture.

Soludine 1% w/v was then liberally applied to the skin of operation area and it was covered with a sterile gauze and draped with a sterile towel.

When patient was taken on the operation table, draping and sterile gauze were removed and a second swab from the skin area was taken for culture.

The surgical procedure needed was then carried out as per usual routine.

Antibiotics used post-operatively were Inj. Streptopenicillin once a day for 5 days for all tubectomy cases and Inj. Streptomycin + Inj. Crystalline penicillin for major abdominal surgery as per usual regimen.

Observations

Table I shows that cultures from skin before treatment with soludine were positive in 53 out of 100 cases.

Table II shows the type of organisms isolated in the culture. In 94.33% 50

cases out of 53 organisms were single. In 5.67% 3 cases organisms were mixed/multiple.

Table III shows frequency of various organisms. Staphylococcus coagulase positive occurred most commonly i.e. 22 out of 53 cases or in 41.5% cases. Citrobacter was next commonly found organism and occurred in 24.52% (13 cases).

Repeat cultures were sterile in all the 53 cases showing that skin area was rendered sterile after application of 1% w/v soludine, 3 to 4 hours prior.

TABLE I
Culture Reports From Skin Before Treatment With Soludine

Type of patient	Total No.	No. with positive cultures	No. with sterile culture
For abdominal tubectomy	64	33	31
For major abdominal surgery	36	20	16
Total	100	53	47

TABLE II
Microorganisms—Cultures From Skin Prior to Treatment With Soludine

Type of organism	No. of cases individual organisms	Total No.
(A) Single organism		
i. Staphylo Coag. positive	20	
ii. Staphylo Coag. negative	9	
iii. Citrobacter	10	3
iv. Pseudomonas	8	
v. E. Coli.	2	
vi. Acinobacter	1	
(B) Mixed/Multiple organisms.		
Citrobacter + Staph. Coag. positive	2	50
Citrobacter + Staph. Coag. negative	1	
Total		53

TABLE III
Incidence of Various Organisms

Type of organisms	Number out of 53 cases	Percentage out of 53 cases
Staphylo. Coag. positive	22	41.5
Citrobactor	13	24.52
Staphylo. Coag. negative	10	18.86
Pseudomonas	8	15.09
E. Coli	2	3.76
Acinobactor	1	2.88

None of the patients in the series developed post-operative wound infection. Soludine was found non-irritant.

and can be used in camp surgery. (Tubectomy/Vasectomy camps).

Discussion

It is observed that application of soludine 1% w/v renders skin sterile and helps to prevent wound infection in post-operative period. Soludine was found non-irritant. Iodine is a time tested anti-septic, which is cheap and easily available

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