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## Prophylactic Antibiotic versus Only Meticulous Pre-Operative and On the Table Proper Painting of the Operating Site in Clean Elective Minor Surgical Cases.

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### ABSTRACT

Preoperative day, night and operative day, on the table meticulous skin preparation of the operating site. This is done with povidone-iodine scrub-paint combination (Betadine) with an isopropyl alcohol application. This gives comparable results in preventing infection. Thus avoids unnecessary exposure of antibiotics and cost effectiveness to the patient.

**Keywords:** Antibiotic abuse, Skin preparation, Prophylactic antibiotic.

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## INTRODUCTION

This is a study conducted in the clean elective minor case to study about antibiotics versus skin preparation with betadine and ethyl alcohol. Recently it was been noticed that antibiotics abuse is being common in the modern era. Hence for clean elective case just the good skin preparation on table is more efficient and essential to prevent infection and antibiotic abuse was been prevented. In this study a 100 case was being selected and being studied.

## MATERIALS AND METHODS

### Inclusion Criteria

Clean elective cases eg: Inguinal, epigastric, umbilical Hernias, Solitary nodule thyroid, Hydrocele, Circumcision and appendicectomy.

Age up to 30 years(Thirty years). Cases operated in SBMCH- Chrompet from 2012 to 20013.

### Exclusion Criteria

Co-morbid diseases, like diabetic, hypertension, skin diseases, anemia.

Complicated hernias. Proved and doubtful thyroid malignancies. Circumcision cases with cracked prepuces, paraphimosis.

## METHODOLOGY

Povidone-iodine scrub-paint combination (Betadine) with an isopropyl alcohol application is used for skin preparation.

Thorough skin preparation was done by a Resident under the guidance of an assistant professor on the night of pre-operative day.

Preparation done from nipple to knee in all hernias and appedecectomies, umbilicus to knee in circumcision, hydrocele and front of neck shoulder up to mid-upper arm in thyroid.

Same team will do the same skin preparation on the table before draping.

Study period one year 2012 to 2013.

Pilot study of 100 cases (varying samples in all cases)

## DISCUSSION [1-5]

In our hospital settings both private and Government, usage of prophylactic antibiotic is administrated as a matter of routine practice with few exceptions. Dosage, time and duration differ.

### Method I

One full dose of 3<sup>rd</sup> generation cephalosporins on pre-operative day night, one dose on the table-peroperatively and one dose on that day night.

### Method II

One full dose on the table-peroperatively and one dose on that day night.

## Method II

Broad spectrum antibiotic parenterally (Amoxacillin 500mg BID or 3<sup>rd</sup> generation cephalosporins OD dose for first three days and same drug oral till suture removed ( varies from Five to seven days ).

Why prophylactic antibiotics required in our settings and same not required in western country settings.

Our setting environment is not very concussive for preventing infection. Weather humid and ours is a tropical country.

Whereas western country settings environment is clean and contusive due to their weather condition. Prophylactic antibiotics may not be required as a matter of routine.

Present study disproves the above notions. Most of the clean elective minor surgeries, infection goes from with out to with in than inherent infection with in. Hence through skin preparation is sufficient and any method of prophylactic antibiotic is not required.

Post-operative infection rate is marginally less in cases with out prophylactic antibiotics, which proves skin preparation is more important than antibiotics. Medical economics, wastage of money. Exposure of patients to drugs with out indication.

Patients has to suffer from pain of IV cannula. Added risk of hospital acquired infection if cannula is kept for more number of days. Additional burden of work and wastage of man-hours of work of Interns and paramedics which may hamper their quality of work.

Unnecessary hospital stay affecting monetary wise to the health care provider and associated expenditure for the patient, loss wages on over stay in hospital. Loss of work force in patients office / work place.

## CONCLUSION

This pilot study indicates the following facts :

Antibiotic abuse on elective clean selected cases.

Loss of money to the health provider both direct and indirect.

Loss of money to the patient both direct and indirect.

Quality of work by both medical and paramedical staff.

Hence, a meta-analysis or cohorts randomized control study to be done with a larger sample.

## ACKNOWLEDGMENTS

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