

EFFECT OF POVIDONE IODINE APPLICATION TO SUBCUTANEOUS TISSUE ON SURGICAL SITE INFECTION AT LOWER SEGMENT CAESAREAN SECTION

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OBJECTIVE

This study was conducted to find out whether the application of pyiodine iodine to subcutaneous tissue before closure of surgical wound will decrease surgical site infection in emergency lower segment caesarean section or not

INTRODUCTION

In a country where population is exceedingly uncontrolled and patients report to hospitals, at the last moment. We have the option between saving the mother and her child's life or an infected wound. The lower levels of resources, poor hygiene and humid environment contribute greatly to the already burdenized healthcare care system. An intervention to reduce surgical site infections was much in need.

METHOD

A randomized controlled trial was held at Maternal and child health care Pakistan Institute of Medical Sciences, Shaheed Zulfiqar Ali Bhutto Medical University. During which the COVID pandemic broke out .The study, completed in eighteen months' time after approval of the synopsis from April 2020 to September 2021.

DISCUSSION

The rate of emergency lower segment caesarean sections has increased tremendously in the present decade followed by a decreasing trend in maternal and neonatal morbidity and mortality. Like all surgeries this also goes hand in hand with surgical site infections especially in hot and humid countries. WHO gives a conditional guideline that in clean and clean contaminated surgical wounds irrigating the wound with povidone iodine before closure decreases surgical site infection. However NICE does not recommend the use of post operative wound irrigation to prevent surgical site infection while Center for disease control and prevention considers its use as a weak recommendation the study was carried out in the era of covert pandemic and it was seen that there was a significant reduction and infected wounds by application of pyiodine to subcutaneous tissue prior to closure of wound, not only this but also erythema and discharge from wound site.

RESULTS

A total of 248 patients were recruited into control and case groups. On 1st to 3rd postoperative day erythema was present in 5.2 %., discharge from the incision was found in 2.8 % and 1.2 % had wound dehiscence in control group. On 7th to 15th postoperative day superficial surgical site infection was seen in only one patient with application of pyiodine and 7 controlled patients (p-value 0 .31).Similarly discharge the from incision was seen in 2 patients and wound dehiscence in 7 patients with application of iodine and 7 patients in control group (p-value 0.09).Wound dehiscence occurred in 2 patients with application of pyiodine and 7 patients in control group (p value 0.90).The infected wound was seen in 2 patients the with application of pyiodine and 8 patient in control group with p-value of 0.53.

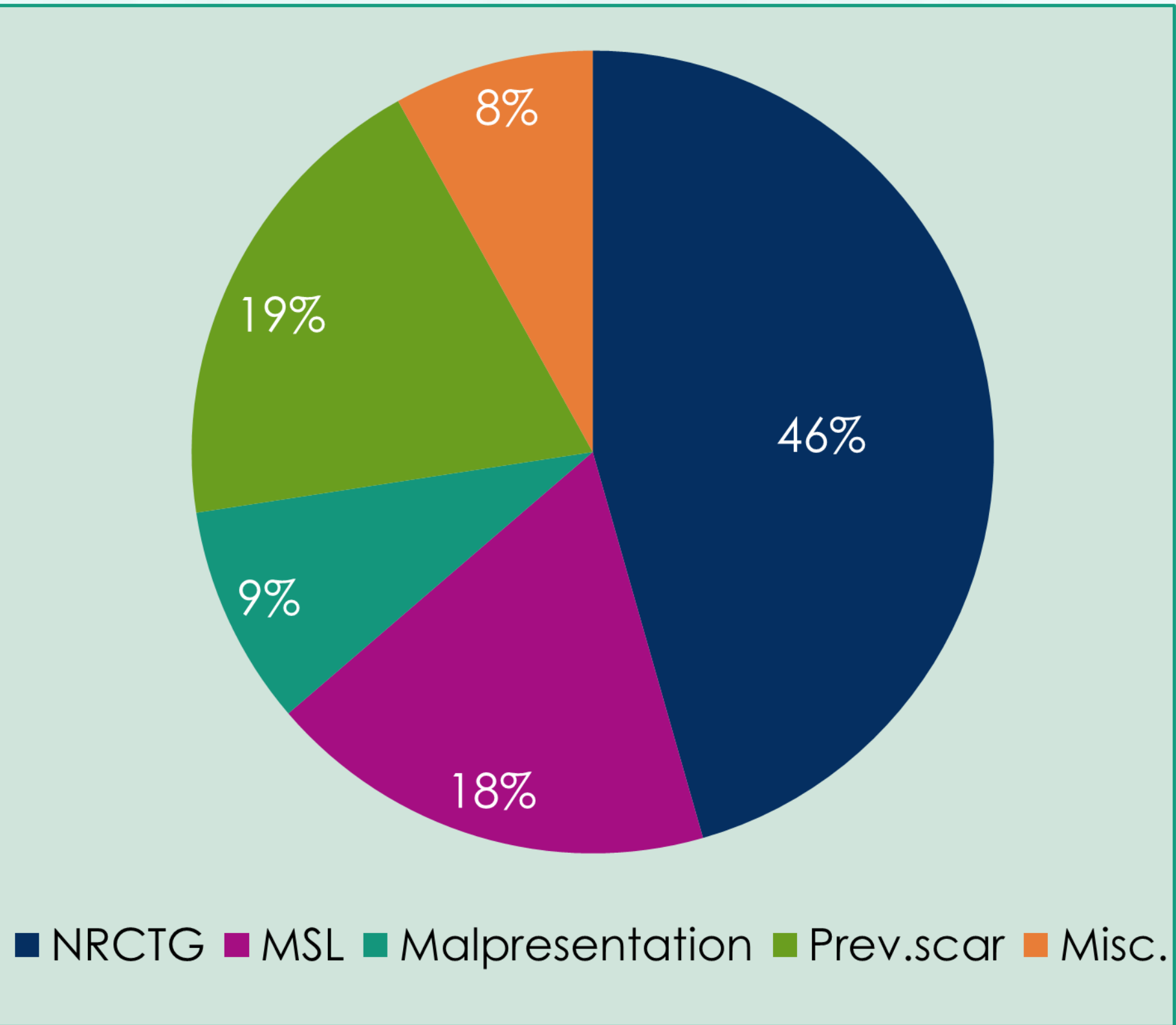


Figure 1. Indications of Emergency lower segment caesarean section

Table II: Comparison of wound infection in case and control groups by Southampton wound grades on 7th st to 15 th post-operative day			
Southampton Wound grade	Group A	Group B	P-Value
	Povidone irrigation n = 124	No irrigation n = 124	
Normal healing	119	116	
Erythema	1	8	.031
Clear or haemoserous discharge	2	7	.090
Pus and Wound dehiscence	2	8	.053

Table I: Comparison of wound infection in case and control groups by Southampton wound grades on 1 st to 3 rd post-operative day			
Southampton Wound grade	Group A	Group B	P-Value
	Povidone irrigation (n = 124)	No irrigation (n = 124)	
Normal healing	120	112	
Erythema	4	9	.154
Clear or haemoserous discharge	Nil	3	.081
Pus	Nil	Nil	
Deep or severe wound infection with or without tissue breakdown; hematoma requiring aspiration	Nil	Nil	

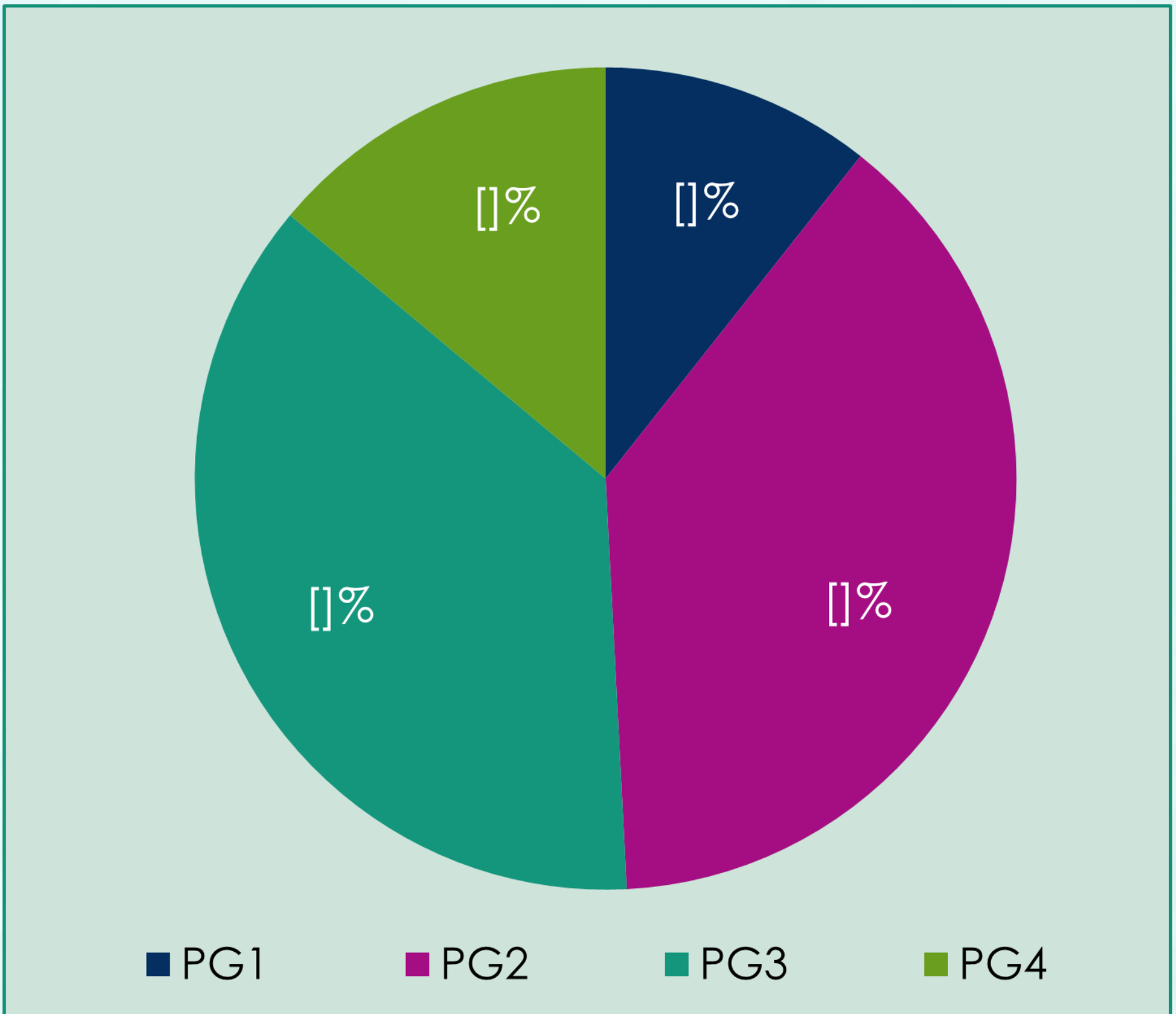


Figure 2. Level of Surgeon performing emergency lower segment caesarean section

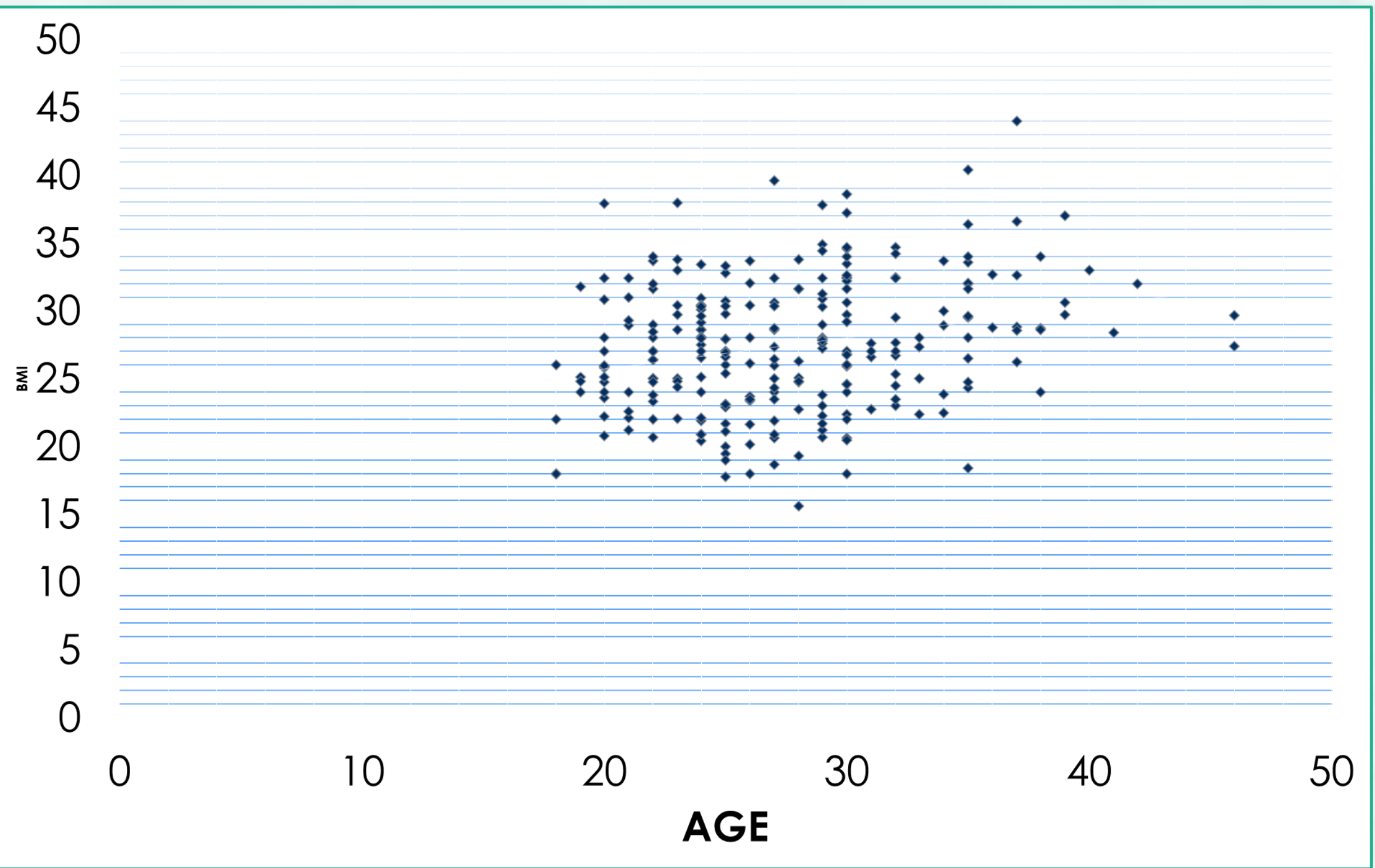


Figure 3. Patient demographic distribution

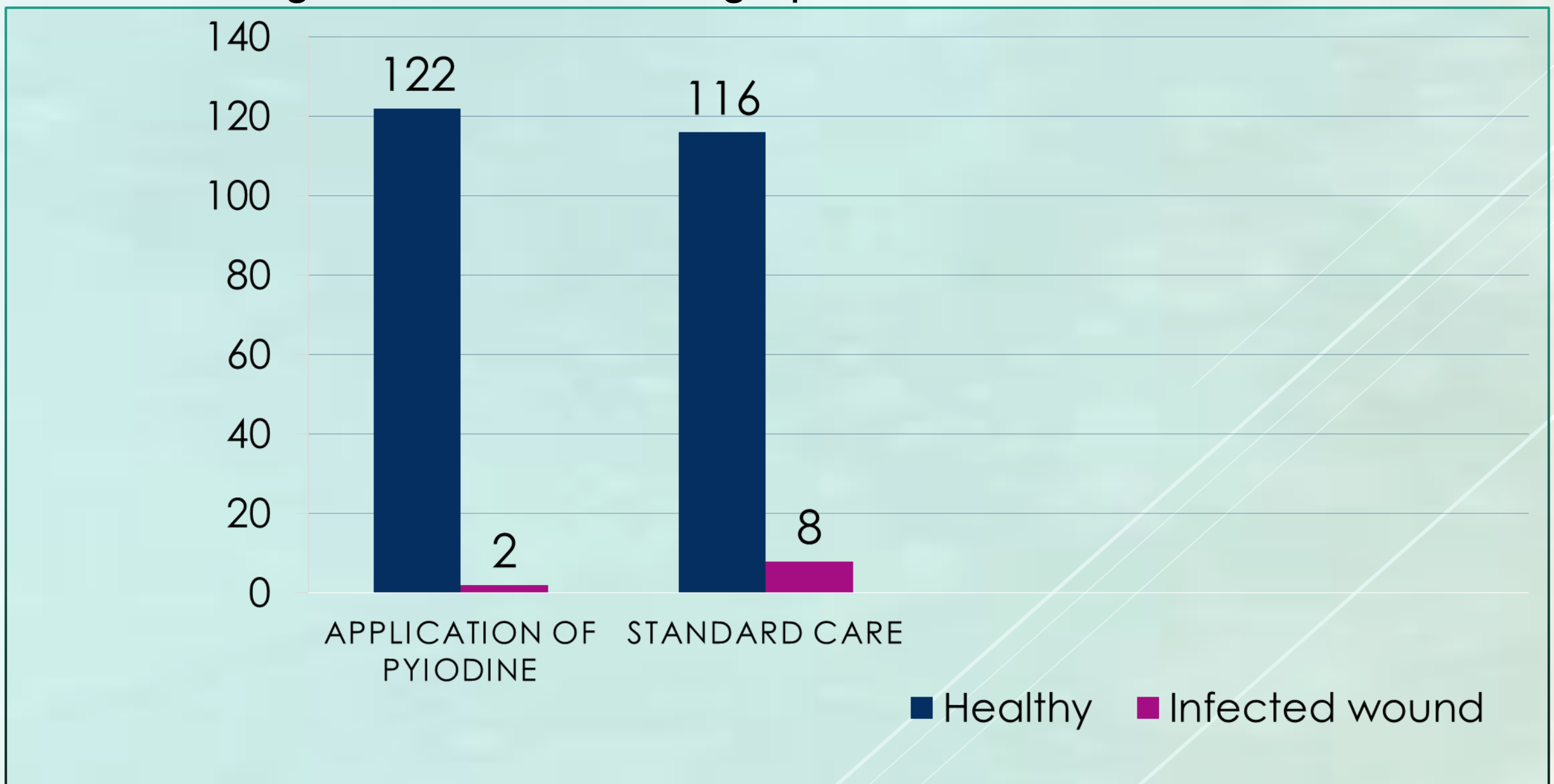


Figure 4. Infected wound in case and control groups of application of pyiodine application

CONCLUSION

Application of pyiodine to subcutaneous tissue after the closure of rectus significantly decreased despite of risk factors were seen more in anemic, diabetic and patients undergoing second stage arrest emergency caesarean section.

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