

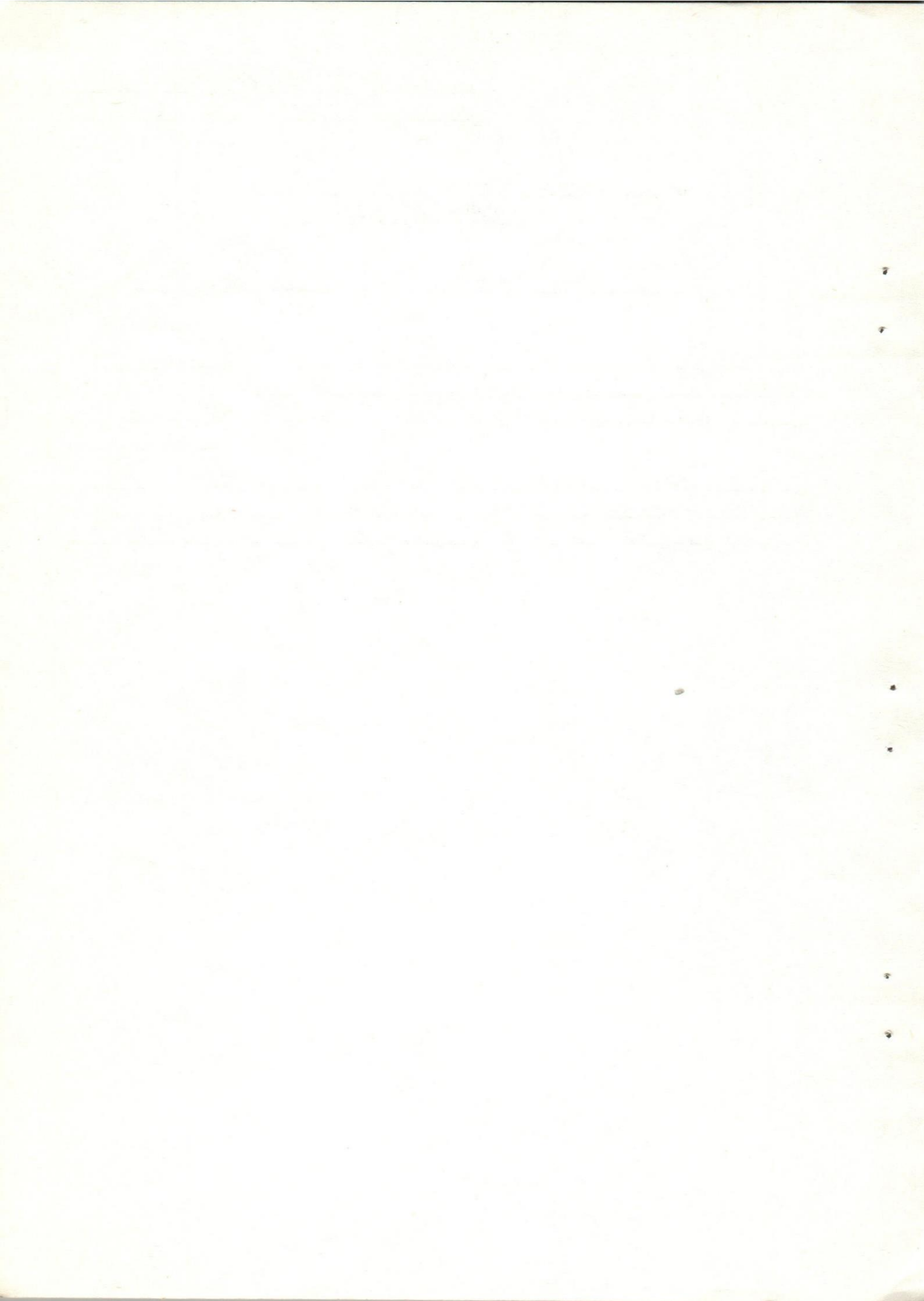
قسم الجراحة - كلية الطب البيطرى - جامعة أسيوط .
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الحقن الوقائى للبوفيدون - ايودين كوسيلة لمنع الالتهاب البريتونى
والالتصاقات الداخلىة

على عبدالمطلب ، محمود طنطاوى ، محمد عبدالمنعم ، محمد مختار

أجرى هذا البحث على عدد ٢٨ كلبا وذلك لدراسة تأثير حقن خليط من البوفيدون -
ايودين لمعرفة مدى تأثيره على منع حدوث الالتهاب البريتونى الذى أحدث
فى الكلاب ، وكذلك تأثيره على عمليات استئصال الامعاء وتوصيلها ، وكذلك على
عمليات فتح القولون .

وقد وجد أن حقن البوفيدون - ايودين يقلل من حدوث الوفاة فى الكلاب التى
أحدث بها التهابا فى الغشاء البريتونى . كما أنه يمنع الالتصاقات الداخلىة
بعد اجراء عمليات استئصال الامعاء وتوصيلها وكذلك بعد اجراء عمليات فتح القولون .



PROPHYLACTIC INTRAPERITONEAL POVIDONE-IODINE AS A MEANS OF PREVENTION OF PERITONITIS AND ADHESIONS

By

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SUMMARY

Intraperitoneal application of Povidone-iodine prevented the mortality of dogs with induced peritonitis as well as adhesions after intestinal anastomosis and colotomy.

INTRODUCTION

The alimentary tract surgeons were frequently confronted by the problems of peritonitis, colonic anastomosis dehiscence, and peritoneal adhesion formation. The commonest cause of death in colonic surgery, frequently follows local infection. HAWLEY (1973). Such infection appears to result from bacterial soiling at the time of operation rather than seepage of bacteria through the completed anastomosis COHN (1968).

The antiseptic Povidone-iodine used intracisionally in alimentary tract surgery prevented subsequent infection (GILMORE and SANDERSON, 1975). Also, intraperitoneal Povidone-iodine reduces the mortality of mice and rat (GILMORE, CLORE, ELIZABETH, and ELIZABETH, 1978).

Therefore, a number of studies have been undertaken to determine the efficacy of Povidone-iodine in prevention of peritonitis, intestinal anastomosis and colotomy and in peritoneal adhesion formation.

MATERIALS AND METHODS

This study is divided into two parts, first peritonitis study, second intestinal and colonic operation and adhesions study. Peritonitis study: In this group eight dogs of different age, sex and body weight were used. Five dogs were intraperitoneally injected with 10 ml. of a suspension of faecal matter, after two minutes a mixture of polyvinyl pyrolidone (PVP) 3.5% and iodine 0.1% in a dose of 1 ml. PVP/Kg. b. wt. and 0.1 ml. iodine/Kg. b. wt. was injected intraperitoneally. Three dogs were used for control and injected 10 ml. of faecal suspension.

Intestinal anastomosis study: Five dogs were used for anastomosis. After closure of peritonium the above mentioned dose of PVP-iodine was applied.

Colotomy study: Five dogs were used for colotomy and after closure of peritonium the same dose of PVP-iodine was injected. Three dogs were used as control for each group.

RESULTS AND DISCUSSION

Peritonitis study: The results were satisfactory and no deaths were recorded among animals injected by the used drug. The animals remained under observation for two months and then sacrificed. At the autopsy no obvious abnormalities have been observed. The controlled group died at different times, the first dog died after 15 days, the second died after 18 days, while the third died after 30 days post injection. The post-mortem changes found at autopsy were peritoneal hyperemia beside capsulated foci from faecal matter scattered on the omentum.

This investigation contradicts with that obtained by GILMORE et al. (1978), who had more than 30% deaths in mice and 4% deaths in rats, although the authors used large dose of Povidone-iodine. Intestinal anastomosis study: Animals operated and given PVP-iodine remained for two months and sacrificed, there were no peri-anastomotic adhesions. While the controlled group showed adhesions between the anastomotic area and omentum as well as between omentum and inner layer of the abdominal wound. The obtained results were better than that recorded by GILMORE et al. (1978). The authors noticed that there was no significant changes between the control and treated animals.

Concerning operations for colotomy, the all operated animals showed no adhesions with Povidone-iodine after two months. The control group showed adhesions between colon and omentum and between omentum and inner layer of laparotomy wound.

A. ABDEL-MOTTALEB, *et al.*

It could be concluded from this investigation that administration of Povidone-iodine intraperitoneally after laparotomy or after gastro-intestinal tract operation was essential for the prevention of peritonitis and adhesions.

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