Surgical Glue versus Tetracycline in prevention and management of post mastectomy seroma

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By
Ahmed Gamal El-Deen Ali El-Maiet
(M.B., B.CH., M.SC)

Supervised By

Prof. Dr. Alaa El-Din Ismail
Professor of General Surgery
Faculty of Medicine
Ain Shams University

Prof. Dr. Ali Mohamed Al-Anwar
Professor Of General Surgery
Faculty Of Medicine
Ain Shams University

Dr. Kamal Mamdouh Kamal
Lecturer Of General Surgery
Faculty Of Medicine
Ain Shams University

Faculty of Medicine
Ain Shams University
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CONTENTS

List of figures

List of tables

Abstract

Breast cancer has remained the second leading cause of cancer death among women worldwide over the past three decades and contributes significantly to cancer surgical load **(Willett *et al*.,2000).** seroma is most common problem occurring after mastectomy. Seroma incidence varied from 10% to over 85% **(Kuroi *et al*,2005)**. The most commonly reported sclerosants in the literature isTetracycline, and, similar to Surgical glue, some reports found it useful whereas others did not **(Rice *et al*,2000)**. This study shows that statistically Tetracycline (TCN) is more effective than Surgical glue in prevention of post mastectomy seroma , beside that surgical glue was cost effective .

Key words: Post mastectomy seroma , Surgical glue , Tetracycline .

Introduction

INTRODUCTION

Breast cancer has remained the second leading cause of cancer death among women worldwide over the past three decades and contributes significantly to cancer surgical load **(Willett *et al*.,2000).**

Postmastectomy seroma is the most common type followed by abdominal seroma **(Clark *et al*., 2004)**. Seroma formation is the most frequent postoperative complication after breast surgery (15-85%) and considered as a side effect of surgery rather than a complication, however not all patients are clinically symptomatic **(Wood worth *et al*., 2006).**

Seroma is defined as a serous fluid collection that develops under skin flaps after mastectomy or in the axillary dead space after axillary dissection (as a consequence of both, Iymphatic disruption and oozing of capillary beds) **(Saydam & Harmancioglu., 2009).**

Recent studies say that seroma fluid is an element of acute inflammatory response as the fluid contains

immunoglobulins and white blood cells **(Pagson *et al*., 2003).** Old opinions says that seroma is formed of lymph which is associated with operations where large areas of lymph bearing tissues are transected **(Velanovich., 2001)**. Others say that it is lymph with fibrinolytic activity and very low fibrinogen level**(Mc Caul *et al*., 2000) .**

Although seroma is not life threatening, it can lead to significant morbidity e.g. infection, flap necrosis, wound dehiscence, predisposes to sepsis, prolonged recovery period, multiple physician visits and may delay adjuvant therapy **(Lopez & Rimm, 2004) .**

Several interventions have been reported with the aim of reducing seroma formation including the use of ultrasound scissors in performing lymphadenectomy, using fibrin glue, bovine thrombin application, and altering surgical technique to close the dead space **(Velanovich., 2007).**

Despite numerous trials of new techniques which have attempted to reduce the incidence of seroma formation, no single method appears to be uniformly effective **(Murai & Takenychi, 2008).**

The first report of Tetracycline sclerotherapy (TCN) for treating seroma after mastectomy was in 1983 by Sitzmann and his colleagues. All patients had a marked decrease in the size of seroma within 48 hrs. In the same year Nichter and his team, demonstrated efficacy of Tetracycline sclerotherapy (TCN) in 4 patients with persistent postoperative seroma. Numerous reports described the use of Tetracycline sclerotherapy in a diverse range of conditions as malignant pleural effusions **(Wong & Hoe, 2009).**

Fibrin glue reduces seroma formation after mastectomy in animal models. Use of a fibrinolysis inhibitor was based on the hypothesis that fibrinolytic activity in serum and lymph might contribute to fluid accumulation **(Silverman *et al*.,1999).**

A number of papers have presented comparative studies of patients with and without fibrin glue in the axillary fossa. Gioffre' Florio et al.,1993, Tasinato et al.,1999, and Tirelli et al.,2003, demonstrated that the use of fibrin glue reduced seroma magnitude, duration and

the number of evacuative suctions on patients on whom fibrin glue spray was used **(Tirelli *et al*.,2003).**

Also Orlando and his colleagues,2000, found that post-operative seroma can present the clinician and patient with a chronic and difficult problem **(Saydam & Harmancioglu, 2009).**

This study discuss how to manage and prevent seroma post breast Carcinoma Surgery, comparing the effect of Tetracycline injection versus Surgical glue, aiming to decrease and prevent such type of morbidity.

Aim Of The Work