

Prospective Randomized Study: high or low pressure aspiration system with Redon type drain in patients undergoing radical axillary node dissection

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Introduction

In spite of being widely used, little scientific evidence is available on closed aspiration systems Redon-like. The type of pressure applied to suction is one of the less studied items. The aim of this study is to provide evidence on the differences in using a high vacuum system with rigid recipient and bigger size (HV, Fig. 1) and a gentler one, with flexible, low vacuum container (LV, Fig. 2). Days of use, drained volumes, morbidity and length of hospital stay in breast cancer patients undergoing radical axillary node dissection (RAND) were studied.



Fig.1. High vacuum system



Fig.2. Low vacuum system

Patients and methods

A randomized, prospective clinical study has been done, including consecutive breast cancer patients undergoing RAND. Blinded study was not possible, as the different types of suction systems are physically different. Once RAND was completed, prior to drain placement, patient was randomized and assigned to high-vacuum group (HVG)

or low-vacuum group (LVG). The variables controlled in both groups were: days of drain use, total volume of fluid drained (drain was retired when less than 35cc per 24 hour were obtained), seroma formation, haematoma, wound infection and hospital stay.

Results

51 patients were included, mean age being 61'3 years, 26 in HVG (51%) and 25 in LVG (49%). Mean hospital stay has been reduced in 1,8 days in LVG vs HVG (p=0'03).

RESULTS	HVS	LVS
Days drain usage	8,8 (+/- 6,7)	6,8(+/-4,8)
Total amount drained fluid	706cc(+/-611)	622(+/-399)
Seroma formation	9/26 persons	8/25 persons
Wound infection	0/26	1/25

Conclusions

Flexible, small, low-vacuum suction system connected to a Redon drain provided a decrease of 1'8 days in hospital stay in patients undergoing RAND for breast cancer, with no significative differences in drained volume and morbidity.