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The use of cling film to facilitate shower after total knee replacement surgery

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Abstract

Background: Total knee replacement (TKR) surgeries are arguably the most successful procedure in recent times. However, personal hygiene remains a big issue, especially in the immediate post operative period. The patients are not allowed to take shower for almost three weeks, due to the fear of wound wetting and eventual surgical site infection. We wished to report that in our institution, for all post operative patients, we use sterile occlusive dressings followed by the use of cling films and allow patients to take shower.

Materials and methods: We studied 100 consecutive patients who underwent TKR surgeries at our hospital. All patients, after wound closure, received sterile occlusive dressings. Further, on post-operative day two, on removing the compression dressings, all operated knee joints were wrapped with cling film in order to allow patients to take proper shower. In this study group, we looked for the following outcomes; surgical site infections (SSI), number of change in dressing required before the completion of wound healing at 3 weeks post surgery. The overall patient satisfaction assessed by visual analogue scale (VAS; 10 being happiest and 1 being most unhappy) at the end of two weeks.

Results: In our study, there were no incidences of SSI, no change in dressing requirement till two weeks post surgery. The mean VAS score at end of two weeks were 8 out of 10 indicating that most of our patients were happy with this arrangement.

Conclusion: Use of cling film for allowing shower in patients undergoing total joint arthroplasty is a good option to maintain overall personal hygiene and high patient satisfaction rate.

Keywords: Total knee arthroplasty, shower in the immediate post-operative period, cling film, patient satisfaction

1. Introduction

1.1 Background

Historically, very little emphasis have been made on improving the personal hygiene with respect to taking early shower in patients undergoing total knee arthroplasty or any major limb surgery. Majority of the surgeons across the globe, do not allow their patients to have shower until all the sutures or staples are removed, typically around two weeks after surgery due to the fear of surgical site infection and possibility of eventual infection. Encouraging early shower and, therefore, early mobilisation has been in use in general surgery [1]. To our knowledge, there have been no studies on early shower in patient with total knee replacement surgery. We wish to report the use of sterile occlusive dressings followed by cling films to cover the surgical wounds in order to allow shower in the immediate post operative period.

2. Materials and methods

We studied 100 consecutive patients who underwent total knee replacement surgery in our hospital. All patients received standard midline incision followed by medial parapatellar osteotomy. After the conventional total knee replacement procedure, the arthrotomy was closed with interrupted absorbable sutures. Wound closure was done with subcuticular absorbable sutures followed by sterile occlusive dressing (Mepilex Border, Mölnlycke Health Care, Sweden) and dressing edges were sealed by using Opsite Flexifix transparent film (Smith & Nephew, U.S.A) Further, on day two, after removing the

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compression dressing, all operated knee joints were wrapped with cling film in order to allow patients to take proper shower (Figure 1). We looked for the following outcomes in their study group; surgical site infections (SSI), number of dressing changes before suture removal and overall patient satisfaction with visual analogue scale (VAS;10 being happiest and 1 being most unhappy). The criteria set for dressing change were: a weeping wound, if more than 50% of the dressing was stained and soaked.

3. Results

Our results showed none of the patient had any evidence of surgical site infection, nor any of them required a change of dressing before the completion of wound healing. The mean VAS score at the end of two weeks was 8 out of 10. Which signifies that patients were highly satisfied.

Table 1: Descriptive table showing mean VAS score of patients

S.no	Age (in years)	Gender	VAS score
1	50	Male	9
2	78	Female	8
3	66	Female	9
4	59	Female	7
5	68	Female	8
6	62	Female	9
7	73	Male	9
8	64	Female	8
9	77	Female	7
10	65	Female	9
11	74	Female	7
12	71	Male	8
13	63	Female	6
14	54	Female	9
15	69	Female	9
16	77	Female	8
17	56	Female	9
18	60	Female	7
19	65	Female	8
20	65	Female	6
21	71	Female	9
22	60	Male	8
23	45	Female	7
24	55	Female	9
25	70	Female	7
26	62	Female	8
27	49	Female	9
28	62	Female	9
29	75	Female	6
30	78	Female	8
31	51	Female	9
32	75	Female	7
33	70	Female	8
34	77	Male	9
35	65	Female	8
36	66	Female	7
37	72	Female	9
38	75	Male	7
39	54	Female	8
40	64	Female	9
41	58	Female	9
42	67	Female	8
43	70	Female	9
44	46	Female	7
45	66	Female	8
46	59	Male	9
47	69	Female	9
48	75	Female	8

49	60	Female	7
50	78	Female	9
51	56	Female	7
52	60	Female	8
53	66	Female	6
54	74	Male	9
55	64	Female	8
56	65	Female	7
57	66		9
58	64	Female	7
59	74	Female	8
60	60	Male	9
61	76	Female	9
62	64	Female	8
63	81	Male	9
64	79	Female	8
65	65	Female	9
66	64	Female	7
67	74	Female	8
68	55	Female	6
69	71	Male	9
70	73	Female	8
71	50	Female	7
72	85	Female	9
73	69	Female	7
74	60	Female	8
75	65	Female	9
76	73	Female	8
77	62	Female	8
78	62	Female	7
79	56	Female	9
80	73	Male	7
81	66	Female	8
82	76	Female	6
83	60	Female	9
84	70	Female	9
85	55	Female	8
86	60	Female	9
87	61	Male	7
88	61	Female	8
89	73	Male	9
90	77	Male	8
91	62	Female	7
92	65	Female	9
93	66	Female	6
94	73	Female	8
95	55	Female	8
96	60	Female	7
97	64	Male	9
98	65	Female	7
99	70	Male	8
100	66	Female	8
			Mean - 8



4. Discussion

It is observed that approximately 30% of patients have the possibility of wound complications after total knee arthroplasty which still remains a matter of concern [2-3]. These patients associated with development of superficial and deep surgical site infections are amongst the reason for increased resource utilization, and longer hospital stays [4-5]. It is known fact that mitotic cell division and leukocyte activity are critical in wound healing. This cellular activity is disrupted with every dressing we change, in a way, delaying wound healing [6]. On the contrary, occlusive dressings increases hypoxia, promoting angiogenesis and accelerate wound healing [7]. Hence we conclude that a cling film provides an additional protective layer to the existing occlusive dressing, which addresses patients personal hygiene and satisfaction with wound care.

5. Conclusion

We believe that the use of sterile occlusive dressings and cling film in addition is a very useful technique for encouraging patients to take early shower and maintain personal hygiene care after total knee replacement surgery.

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