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Prospective Study of Surgical Drains and its Psychological Effects on Patıents Undergoing Surgery

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Abstract-

Back-ground:- Surgical drains have a negative impact on a patients psychology as persistence of a foreign body in patients creates sense of irritation with associated unwillingness to mobilize themselves in view of pain.

Purpose: This study aimed to determine post-operative pain, drain discomfort and irritation of patients with drains postoperatively.

Methodology: Research was performed on 90 patients undergoing elective abdominal surgeries with distribution of patients in drain & Non-drain group. Patient Information Form, their pain levels were analysed and the data was analysed accordingly.

General Comfort Questionnaire. In evaluating the data, we used the p value significance, variance and correlation analysis, mean, percentage and frequency. It is a cross-sectional study.

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Results: In the present study as per the data recorded 28% of patients had drain site discomfort. Drain site infection & discharge was noted in 10% & 16% respectively.
Conclusions: Surgeries and drains applied after these procedures decrease the comfort level of the patients as it increases the pain and irritation levels. Also, pain and discomfort increase the patients' anxiety as well. Nurses who are providing care to these patients are suggested to improve measures about pain and anxiety reduction for maintaining of comfort.

Key Words: Anxiety, Comfort, Drainage, Nursing Care, Pain.

Introductıon

Drains usage has been used in surgery for many years to prevent the accumulation of bodily fluids and improving body function(1). Drains are widely used in order to accelerate the healing process and prevent complications in the postoperative care of patients.(2)

Drain provides an exit for fluids, pus,blood or necrotic debris that interferes with wound healing or may be a source for bacterial proliferation. Knowing the functional modality and the current available evidence for using the drains that may reduce unnecessary usage of drains. These drains are used for both prophylactic and therapeutic purposes.(3) The review of the studies conducted show that the usage of drains in abdominal surgeries specifically clean cut surgeries do not have any medical facts to support it.

However various studies show there many factors which support the facts that unnecessary insertions of drain can lead to drain site infection , hospital psychosis, persistent drain site pain , unwillingness among patients for oral diet with drain in situ(4), lack of willingness/ effort & fear among patient/ relatives to mobilize in view of drain in situ which furthermore prolongs the post operative recovery period among patients with drains .

For some surgeons, the main purpose of using a drain after surgeries such as colorectal anastomosis is to guide exudation to flow out of abdominal cavity(5)(6) rather than accumulation, in case of anastomotic dehiscence and infection. Anastomotic leakage, hemorrhage, or infection of abdominal cavity are expected to be diagnosed early by prophylactic placement of a drain.

Nonetheless, the surgeons who opposed routine use of a prophylactic drain claimed that it could cause infection stimulate the formation of serous fluid and get blocked quickly.(7)Considering the negative effects of drains on painand comfort, realising the pain and comfort levelof patients with drains after surgery(8) and theeffect of pain and comfort on each other andanxiety has an important role in regulation ofnursing interventions to relieve pain and increasecomfort and evaluation of expected results. Hence this study is being done to determine pain, comfort and irritation level of patients with drains after surgery

Study Questions:
1. How many patients complain of drain site pain?
2. Do patients complain of discomfort?
3. What is thelevel of irritation in patients with drains?

Methodology- The present study was undertaken in a rural hospital in central India. This study was a prospective observational study. The study period was from June 2019 to June 2020. Around 90 patients were enrolled in the study. It was a joint study between Acharya Vinoba Bhave Hospital, Wardha & Jawaharlal Nehru medical college, Nagpur.

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All the elective abdominal cases of both sexes admitted in the surgical ward through opd or in an emergency requiring elective abdominal surgeries for various abdominal pathologies will be evaluated with detailed history, examination, pathology, surgical procedure underwent, postoperative course, various drain site complications and patients care, duration of hospital stay and follow up till 1month was documented.
They received similar postoperative antibacterial protocol and other treatments (nil per orally, iv fluids, analgesics). these cases were grouped into no- drain and drain group. The study was done after the approval from the ethics committee of Datta Meghe Institute of Medical Sciences University. It is a cross –sectional study.

Inclusion Criteria :
All The Operated Cases For Various Intra-Abdominal Diseases On Elective basis Were Included

Exclusion Criteria :
1. Diabetic Cases
2. Patients<6yrs Of Age
3. Patients Underwent Abdominal Surgeries (Elective) That Died Within 48hrs After Surgery.

4. Patients undergoing emergency surgeries

Data Analysis
Evaluation of the collected data was done with SPSS 16.0. As descriptive statistical methods, frequency, percentage, mean, and standard deviation; for evaluation of relations between the parameters, t-test, variance and correlation analysis were used. Results were evaluated in 95% confidence interval and $p<0.05$ significance level.

Results –

In the present study of 90 patients, the presentation was between 11-74 years with the majority of patients in the age group of 31-40yrs. There were 63 male and 27 female patients. Patients were randomly distributed into drain & Non- drain. The drain group had 50 patients while the non-drain group had 40 patients.

Table 1- Age wise distribution of patients

Age Group(yrs)	Drain	Non Drain	Total	χ2-value
≤20 yrs	1(2%)	2(5%)	3(3.33%)	
21-30 yrs	6(12%)	5(12.50%)	11(12.22%)	
31-40 yrs	10(20%)	13(32.50%)	23(25.56%)	
41-50 yrs	13(26%)	8(20%)	21(23.33%)	4.77
51-60 yrs	10(20%)	9(22.50%)	19(21.11%)	p=0.44,NS
>60 yrs	10(20%)	3(7.50%)	13(14.44%)	
Total	50(100%)	40(100%)	90(100%)	
Mean±SD	47.10±13.44	42.85±14.22	45.21±13.88	

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Range	16-68	11-74	11-74	

Table 2- Statistical data presentation of table 1

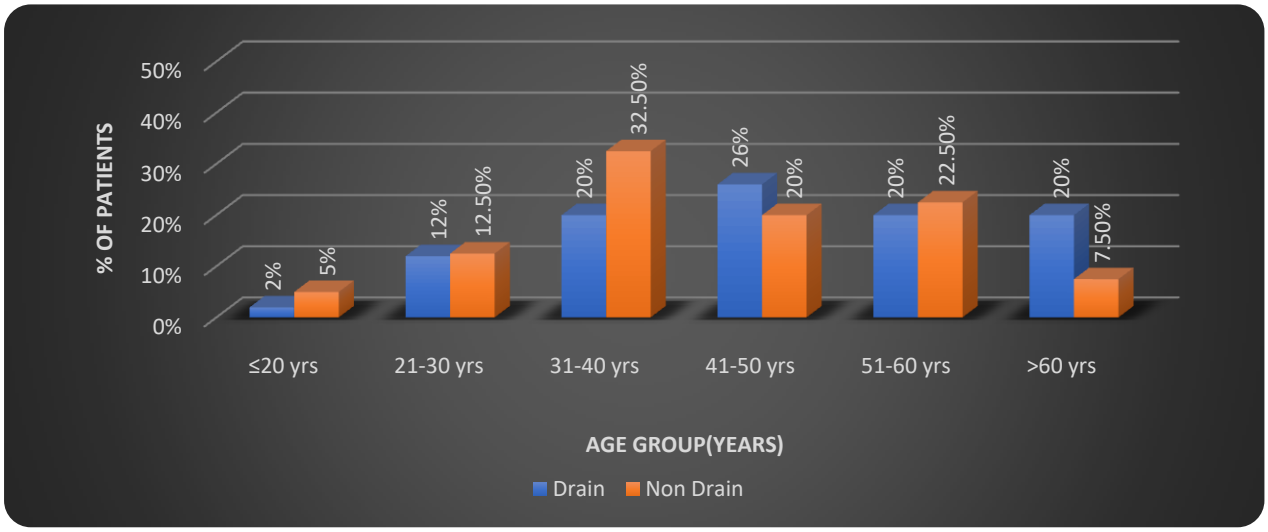
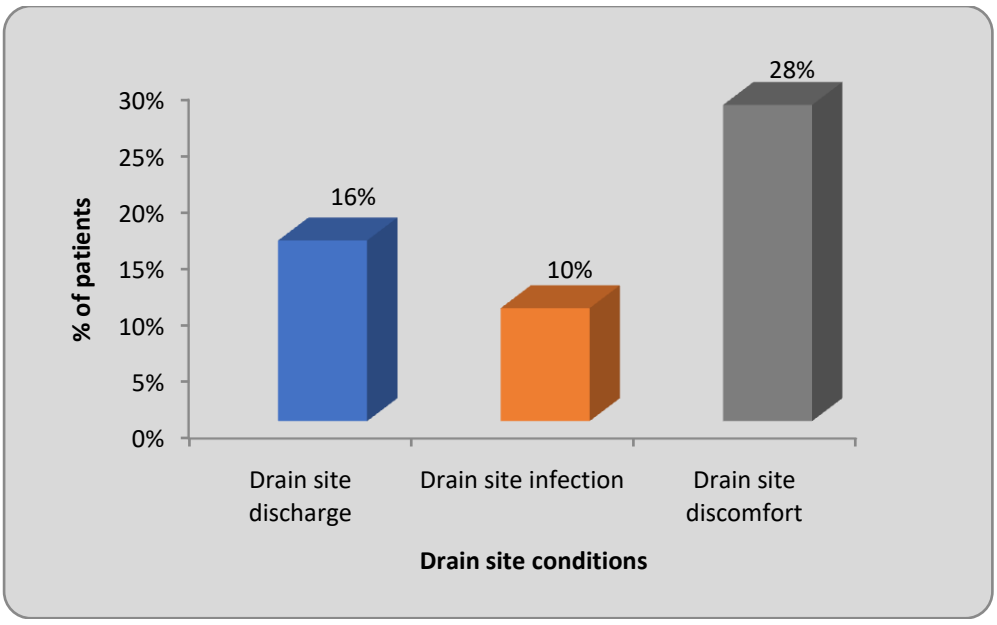


Table 3: Distribution of drain patients according to drain site conditions

Drain site conditions	No of patients(n=50)	Percentage
Drain site discharge	8	16
Drain site infection	5	10
Drain site discomfort	14	28

Table 4- Distribution of drain patients according to drain site conditions



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Discussion-

The following study was carried out at Datta meghe institute of medical sciences, wardha which is a rural setup. In the present study of 90 patients, it was seen that the mean age of presentation was 45.21±13.88, the youngest patient being 11 years old and the oldest patient being 74 years old. The highest number of patients were in the age bracket of 31-40yrs (25.56%).

STUDIES	NO. OF PATIENTS	MEAN PRESENTATION
Imad Wajeh Al-Shahwany et al 2012(9)	84	27±12YEARS
Chi-Leung Liu et al 2004(10)	106	53.2 ± 1.4YEARS
Aristithes G Doumouras et al 2017(11)	142,631	44.7 ±12.0 YEARS
Salamat Khan et al 2015(12)	171	35.57 ± 16.42 YEARS
Jack Hoffmann Et Al 1986(13)	70	72 YEARS
Present study	90	45.21±13.88

In the present study as per the data recorded Among 50 patients of the drain group, 28% of patients had drain site discomfort. Drain site infection & discharge was noted in 10% & 16% respectively. The data collected was compared to similar studies focusing on the impact of drain on the overall comfort and local site infection associated with drains as mentioned below.

STUDIES	**NO.OF PATIENTS TAKEN**	**DRAIN SITE COMPLICATIONS**
Rn patil et 2018(14)	60	14% Drain site discomfort &14.28% had Drain site infection
Chi-Leung Liu et al 2004(10)	106	44.2% cases had drain site discharge & 7.7% case had drain site infection
Jack Hoffmann Et Al 1986(13)	70	3.5% Drain site discharge

Related studies were reviewed (18-20). Different studies on various kind of abdominal surgeries were reported by Saranya et. al. (21), Shiras et. al. (22) and Yeola et. al. (23,24).Studies by Jindal et. al. (25) and Fulzele et. al. (26) reflected on related problems.

CONCLUSIONS- Owing to many factors associated such as drain site infection , hospital psychosispersistent drain site pain , unwillingness among patients for oral diet with drain in situ, lack of willingness/ effort & fear among patient/ relatives to mobilize in view of drain in situ the postoperative recovery period among patients with drains also increases. Hence drain continue to have a negative impact on the psychosis of patients.

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Conflict of Interest: There are no conflicts of interests.

Footnotes
Source of support: Nil
Conflict of Interest: None declared.

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