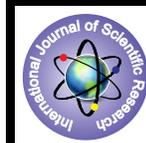


Mortality And Morbidity in Opium Addict Surgical Patients in Western Rajasthan



Medical Science

KEYWORDS : Opium addiction, Social custom, Opium initiation ceremony, Opiate withdrawal syndrome.

Dr. S.S. Rathore

Professor, Department of Surgery, MDM Hospital Jodhpur

Dr. Mahatab Singh Rajawat

Postgraduate, Department of Surgery, MDM Hospital Jodhpur

Dr. Jagdish Kumar

Postgraduate, Department of Surgery, MDM Hospital Jodhpur

Dr. Vijay Verma

Assistant Professor, Department of Surgery, MDM Hospital Jodhpur

ABSTRACT

Opium addiction is rampant in Western Rajasthan and probably has the highest number of opium addicts in the world. The study envisages upon the presentation, diagnosis and various postoperative complications in surgically ill opium addicts vis-à-vis non addicts. The prospective cohort study was conducted at Mthura Das Mathure Hospital, Jodhpur between December 2012 and December 2014 and included cohorts of 100 opium addict and 60 non-addict patients admitted in various surgical wards. The study focused on the complications encountered and final outcome of complication in surgical patients. Study revealed that opium addict patients had a significantly higher incidence of postoperative respiratory, cardiovascular, systemic and local complications. The requirement of analgesics and duration of hospital stay were also significantly higher as compared to control group. The work concludes that opium addicts suffer a much higher degree of postoperative morbidity as compared to non-addict.

Introduction

The word 'Opium' is derived from Greek, meaning 'Juice'. It is obtained from the milky exudate of the incised unripe fruit of the poppy plant *Papaver somniferum*.¹ In rural areas of western Rajasthan opium is consumed in social gatherings, marriages and even at condolence. Opium initiation ceremonies are held in various rural communities such and offerings are made to Lord Shiva.

It is also believed that prevalence of opium addiction is high in TB and COPD cases as where it is used to suppress cough. The study envisages upon the presentation, diagnosis and various postoperative complications management modalities of complications, their final outcome and comparative analysis of these results in surgically ill opium addicts vis-à-vis non addicts.

Material and Methods

The prospective cohort study was conducted at Mthura Das Mathure Hospital, Jodhpur, between December 2012 and December 2014 and included cohorts of 100 opium addict and 60 non-addict patients admitted in various surgical wards. The study focused on presentation, diagnosis and various postoperative complications management modalities of complications, their final outcome and comparative analysis of these results in these addict patients vis-à-vis others. The results thus obtained were evaluated statistically (mean±SD, SEM, two tailed *t* test, chi-square test), *p* value of <0.05 was considered as significant.

Results

The study suggests that opium addiction is common in rural areas as 74% cases belonged to rural background and are elderly people. Mean duration of consumption was 22.48 years. The youngest addict was 30 years old and the oldest was 82 years of age.

Majority of patients were consuming opium as a part of social custom 63% and 17% got addicted to it seeking relief from some form of pain while 8% took to addiction for suppression of chronic cough. The study suggested that in opium addict group 45% of cases also smoked. Associated parallel tobacco (smoking/chewing) and/or alcohol addiction was also noted in over 60% of patients (60.6%).

On clinical examination anemia, jaundice, lymphadenopathy, tachycardia was distributed equally in opium addicted and control group.

Opium addict group patients were managed by emergency operation 44% cases, routine surgery 36% cases, conservatively 20% cases. Majority of patient which were managed conservatively were suffering from SAIO (10% cases).

Respiratory complications were more in opium addicts in routine operation (34%) as compare to control group(31.67%), in emergency operation(56.8% vs 44.2%). Cardio vascular complications were more common in opium addicts ($p < 0.003$), in emergency procedures ($p < 0.02$).

Opiate withdrawal syndrome, requiring psychiatric evaluation, was seen in 34 patients. Systemic complications were not seen following routine surgery in either group. Systemic complications following emergency surgery were more common in opium addicts ($p < 0.05$). Septicemia (29.55% vs 17.65%), shock (50% vs 35.29%) and death (34.1% vs 26.47%) were all more common in opium addicts. Local complications following emergency procedures were seen equally in both groups.

In persons who were smokers in addition to opium addicts alone respiratory, cardiovascular and systemic complications were more common as compared to patients who consumed opium alone respective *p* value are ($p < 0.05$, $p < 0.0001$, $p < 0.0001$). Thus smoking might had been acting as a confounding factor influencing the results in opium vs non opium groups.

Mean duration of hospital stay in opium group (9.9 ± 5.53 days) was more than control group (8.25 ± 3.55 days) ($p < 0.05$).

Discussion

Abuse of narcotics and narcotic analgesics for relief of pain may be a global phenomenon. Maximum duration of addiction encountered was for 50 years in one case. Youngest opium addict was 30 years old and eldest was 82 years old. Mean duration of consumption was 22.48 years. **Figure 1**

The study suggests that opium addiction is common in rural areas as 74% cases belonged to rural background and in elderly people ($p < 0.001$). Our finding is different to another study in which, 97.2% opium addicts patients were from rural background.²

Majority of patients were consuming opium as a part of social custom and for pain relief. These findings were comparable with other study, wherein 62% were consuming opium as part of social custom.²

Respiratory complications were seen equally in both groups (34 vs 31.67). However in emergency operation complication were more common in addicts (56.8% vs 44.2%) (Table I). Similarly in other study respiratory complications were (61.9% vs 40%).

Cardio vascular complications were more common in opium addicts in routine ($p < 0.03$) and in emergency ($p < 0.02$). Hypertension in addict and hypotension in control group were more common (Table I). Similarly in other study cardiovascular complications were (88.7% vs 44%).²

The incidence of gall bladder diseases and hernia were less than expected. Other studies suggest that morphine and opioids have been shown to cause functional obstruction of common bile duct and sphincter of Oddi spasm⁷. Stasis has long been thought to be a factor contributing to gall stone formation. Therefore one would expect opium addicts to have higher incidence of gallstones.^{7,11}

Systemic complications septicemia, shock and death following emergency surgery were significantly more common in opium addicts as compare to controls. Renal failure was seen equally in both groups. In patients managed conservatively, death was seen in only opium addicted group (3 cases; 15%) (Table I). These findings were comparable with other study.²

The compensatory potentials of the myocardium are reduced in drug abuse¹². A case control analysis of matched pairs showed significant association between opium addiction and pulmonary tuberculosis (Odd's ratio = 2.61 and attributable risk = 0.099)¹³.

Opiate withdrawal syndrome, requiring psychiatric evaluation, was seen in 34.1% patients (Table I). In other studies, Opiate withdrawal syndrome was seen in 11 to 27%.^{14,16}

Local complications were evenly distributed in the 2 groups. However other study found that local complications were higher in opium addicts (47.9%) as compare to controls (12.4%).² (Table I) In other studies local complications were higher in opium addicts (47.9%) as compare to controls (12.4%).²

Intestinal obstruction or perforation peritonitis were more common in opium addict patients (36% vs 21.67%; $p = 0.05$). Lack of pain and late presentation results in increased incidence of perforation in opium addicts. Diagnosis related to gastrointestinal tract disease was seen in 63%. This was comparable to the finding (73.2%) observed in the other study.²

Opium addict group patients were managed by emergency operation 44% cases, routine surgery 36% cases, conservatively 20% cases. In opium addict patients exploratory laparotomy was carried out in 21 cases, herniorrhaphy for obstructed hernia in 2, and colostomy for large bowel obstruction in 2 patients. In contrast, laparotomy as an elec-

tive procedure was done in only 5 cases in opium group (including of 3 cases of cholecystectomy). In other study explorative laparotomy accounted for 55.9% of all surgeries in opium addicts.²

In persons who were smokers in addition to opium addicts respiratory complications were more common as compare to patients who consumed opium alone ($p < 0.05$). Similarly cardio vascular complications were more common ($p < 0.0001$). Systemic complications more common ($p < 0.0001$). Local complications were also more common. However the finding were not statistically significant ($p > 0.05$) for local complication. Thus smoking might had been acting as a confounding factor influencing the results in opium vs non opium groups.

In patients who were both alcoholic and opium addict, respiratory, cardio vascular, other systemic complications were more as compared to those who were opium addict alone respective p value ($p < 0.05$, $p < 0.0001$, $p < 0.0001$ respectively). However, local complications did not increase in incidence in patients taking alcohol and opium as compared to opium alone. Thus alcohol consumption might had been acting as a confounding factor as well.

With increasing duration of opium addiction (taking opium for < 10 years as compared to taking opium for > 30 years), incidence of cardio vascular complication increase. This was statistically significant ($p < 0.05$). Similarly respiratory, local, systemic complications were found to increase. However this finding was not statistically significant ($p > 0.05$).

Mean duration of hospital stay in opium group was 9.9 ± 5.53 days. Mean duration of hospital stay in control group was 8.25 ± 3.55 days. Thus opium addicts had a longer hospital stay ($p < 0.05$).

Conclusions

A thorough comparative analysis revealed that majority of opium addicts belongs to rural background and higher age group and had a significantly higher incidence of intestinal obstruction and perforation postoperative respiratory (if operated in emergency), cardiovascular, systemic and local complications. The requirement of analgesics during this period and duration of hospital stay were also significantly higher as compared to controls. Increased duration of addiction and associated other addiction (alcohol, tobacco) increases all above said morbidity.

Figure 1: Distribution of studied subjects according to duration of addiction

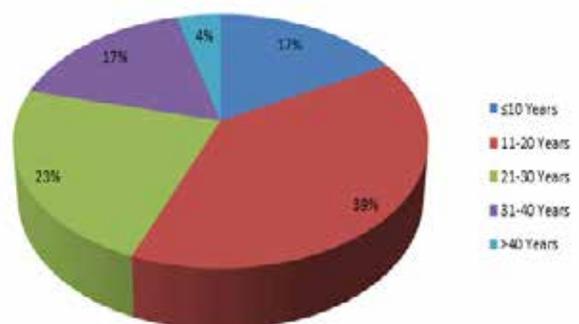


Table I: Complications observed in studied subjects according to operative settings

Complications	Routine*		Emergency**		Conservative***	
	Opium Ad-dicted	Non Opium ad-dicted	Opium Ad-dicted	Non Opium Ad-dicted	Opium ad-dicted	Non Opium Ad-dicted
	%(N=36)	%(N=19)	%(N=44)	%(N=34)	%(N=20)	%(N=7)
Respiratory Complications	8.33	5.26	56.8	44.2	30	42.86
Pneumonitis	5.55	5.26	27.3	20.6	15	28.57
Pleural effusion	2.78	0.00	15.9	11.8	10	14.29
ARDS	0.00	0.00	13.6	11.8	5	0.00
Cardio Vascular Complications	27.78	15.79	75.00	47.1	65	57.2
Hypertension	5.56	15.79	15.9	8.8	40	0.00
Hypotension	2.78	0.00	52.3	32.4	25	28.6
EKG Changes	19.44	0.00	6.8	5.9	0	28.6
Local Complications	11.11	5.26	34.1	29.4	0	0
Stitch Abscess	5.55	0.00	9.1	8.8	0	0
Wound Dehiscence	2.78	5.26	18.2	14.7	0	0
Burst abdomen	2.78	0.00	4.5	5.9	0	0
Fistula Formation	0	0.00	2.3	0	0	0
Systemic Complications	0	0	63.7	38.3	25	42.9
Opiate withdrawal syndrome	0	0	34.1	0	15	0
Septicemia	0	0	11.4	11.8	5	0
Shock	0	0	9.1	11.8	0	42.9
Death	0	0	6.8	8.8	5	0
Renal failure	0	0	2.3	5.9	0	0

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