

# Discontinuation of opiate treatment: a retrospective review of 49 patients

## Abstract

This retrospective study reviews 49 patients- one year with opiate and one year post treatment discontinuation - treated at a private outpatient psychopharmacology center. This retrospective study reviews the health status of 398 patients with two distinct subgroups, 17 local and 32 out-of-town patients. Results revealed significant rise in fatalities after opiate discontinuation. The review results are consistent with increased risk of premature death following opiate discontinuation. It may also suggest possibly not fully understood opiate associated neuroprotective mechanism to prevent premature death for some vulnerable subgroups.

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## Background

In general people with dual diagnosis – psychiatric and substance use disorders – may represent a high risk of premature death consistent with the study by Grant et al.,<sup>1</sup> Of special significance has been the study by Kakko and colleagues reporting 20% death rate among placebo patients versus 0% death among buprenorphine treated patients in one year,<sup>2</sup> There is also compelling neuroimaging evidence of neuro degeneration and brain atrophy associated in chronic pain patients who are often treated with opiates.<sup>3</sup> Risk of death associated with opioid treatment or dependence has been a subject of controversy. The validity of opiates related vital statistics due to recording errors has been raised.<sup>4</sup>

### The focus of this study is narrow

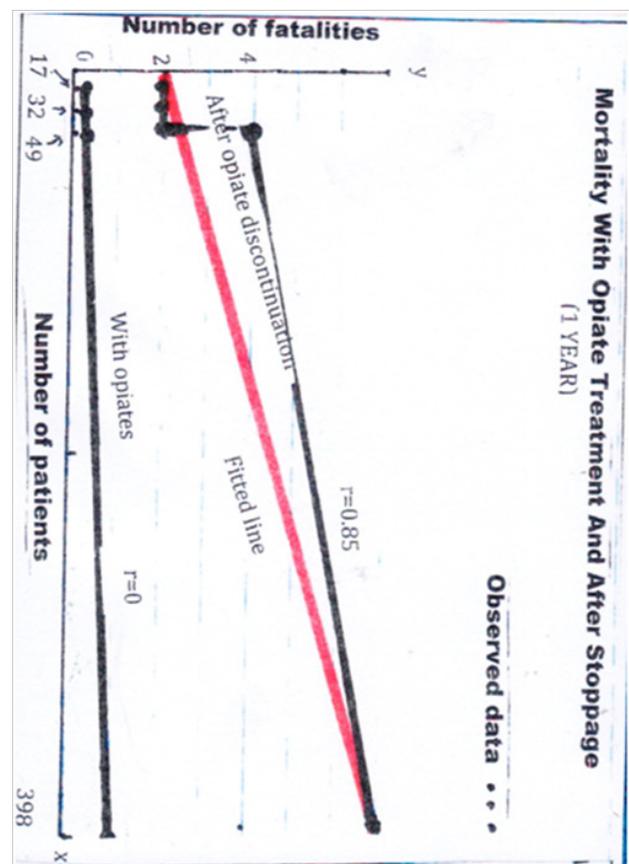
To review clinical states of 49 patients in 12 months following discontinuation of treatment. Prior to their discharge, 49 patients were stable on opioids without any life-threatening medical conditions. No evidence of potential suicidal behavior, overt signs of depression or functional impairment were observed in medical records. All patients had appropriate referrals for follow up. All patients were informed of potential risk of adverse events associated with discontinuation of treatment.

## Method

Medical records of 49 patients (ADOT-administrative discontinuation of opioid treatment) during 2 years, 1 year with treatment and 1 after treatment interruption were reviewed. Routine documentation included DSM-IV based diagnosis and pain-mood assessment on a scale of 1 to 10 with one representing the worst and 10 representing the best. Vital statistics were obtained from official documents and death notices. Data for one year post intervention period was obtained from official reports. 3 separate groups were studied:

- ADOT-O patients from outside of Washington DC area treated with opioids (n=32).
- ADOT-L: patients from Washington DC metropolitan area treated with opioids (n=17). (One medical record was excluded because patient's last medical visit was three years earlier).
- AS: Administratively discharged patients receiving controlled substances (n=398).

d. NS: Not administratively discharged, active patients (n=800).



**Figure 1** Fatalities among AS and NS patients in 12 months with and after treatment.

## Results

- In ADOT (n=49, average age = 49) there were 4 fatalities-2 by suicides-in 12 months after stoppage of treatment. No death was recorded before stoppage.
- In ADOT-O (n= 32) there were 2 deaths, 1 by suicide in 12 months after stoppage of treatment. No death was recorded before stoppage.

- c. In ADOT-L (n= 17) there were 2 deaths, 1 by suicide in 12months after stoppage. No death was recorded before stoppage.
- d. In SA (n=398) there were 7 deaths 4 by suicide.

All fatalities occurred among patients with discontinued or significantly reduced amount of opioid treatment.

Figure 1 and Table 1 show mortality data of 49 patients before and after opioid discontinuation. During one year post-discontinuation a statistically significant correlation between number of patients previously treated with opioids and the number of fatalities (r=0.85) was observed. In contrast during one year pre-discontinuation there was no correlation between number of patients and number of fatalities (r=0).

(SA) and (NA) fatalities revealed the following results: there was none among (NA) people with psychiatric problems not treated with opiates versus 7 in (SA). Of significance number of patients (n=800) in (NA) were twice the number of patients in (SA; n=398).

One year fatalities before and after stoppage of treatment revealed major increases in all subgroups with the exception of (NA) (Table 2) (Figure 1 & 2). The average and the highest daily intake of opioids were respectively 580mg and 880mg of morphine equivalence. The youngest patient was 21 and the oldest 67.

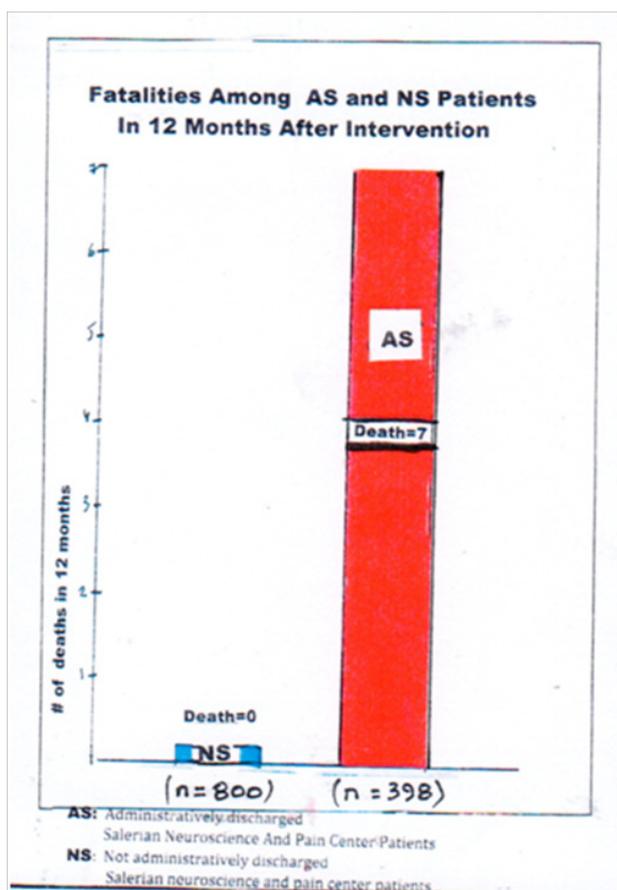


Figure 2 Mortality with opiate treatment and after stoppage.

### Discussion

Is it possible that the increase in deaths may be due to an adverse influence of past treatment or associated with withdrawal from

opioids? The following brief clinical reviews may offer helpful insights:

- i. **Victim #1- JN:** At the time of a self-inflicted death he was attending an outpatient methadone clinic and was on methadone. His death occurred 4 months after stoppage of treatment. Hours before his self-inflicted death he had been to a local emergency room reporting suicidal thoughts and depression.
- ii. **Victim # 2-PM:** He shot himself one year post treatment interruption and on the same day he learned that his former doctor would not soon resume practice.
- iii. **Victim # 3DS:** She died of postsurgical complications 10months after treatment stoppage. The exploratory surgery was for acute abdominal pain of unknown origin.
- iv. **Victim # 4 DM:** He died from unknown medical problems one year after his last outpatient visit.

Table 1 Fatalities with opiates and after discontinuation of treatment: (one year before and one year after stoppage)

	ADOT	ADOT-L	ADOT-O	S	AS	NS
n	49	17	32	1198	398	800
DA	4	2	2	7	7	0
DT	0	0	1	1	0	

S= total number of clinic patients (1198); AS= administratively discharged patients (398); NS= not administratively discharged patients (800); ADOT= administratively discharged opiate patients (49); ADOT-L= administratively discharged opiate local patients (17); ADOT-O= administratively discharged opiate out of town patients (32); DT= death during treatment; DA= death after treatment.

Table 2 Fatalities among Administratively Discharged (AS) and Not Administratively Discharged (NS) patients one year after discontinuation of treatment

Death	
AS(n=800)	0
NS(n=398)	7

SD: Standard Deviation; BMI: Body Mass Index; WC: Waist Circumference; AC: Abdominal Circumference; HC: Hip Circumference; RER: Respiratory Exchange Ratio; HR: Hear Rate.

In summary, the observation is consistent to believe the 4 premature deaths were unrelated to past treatment. For instance, victim #1 was on methadone and therefore withdrawal was not a contributor. His actions were consistent with serious life-threatening depression indicated by his visit to a local emergency room because of suicidal urges. Because of 7 and 12month separation from past treatment (victims 2,3,4) it is very unlikely that their past treatments were causative.

### Summary

The clinical signs support the impression that there was no causal relationship between past treatment and the fatalities. And furthermore clinical evidence seems to support potential protective influence of opioid treatment. In addition, two clinical vignettes suggest “loss of hope” to get relief from emotional and physical pain might have been crucial for suicides. Noteworthy is the observation that the high mortality rate among (AS) patients with cessation of opioid treatment is similar to the observations by Kako and colleagues of high rate of mortality among placebo patients with opioid dependence. Neuro degeneration induced brain dysfunction associated with chronic pain is consistent with the possibility that chronic pain might have contributed to decline of mental function and to adverse outcome.<sup>2</sup>

Two additional and independent variables -the relatively young average age-39 and 54-and clinical stability in both groups increase the likelihood of a positive correlation between the stoppage of treatment and the fatalities and the potential neuroprotective properties of opioids. The limitations of this review include its' retrospective nature, small size and patients taking multiple medications. However the observation that, in two independent groups, opioid discontinuation was the common denominator associated with a statistically significant major increase in deaths suggest a positive correlation between the stoppage of opioids and deaths.

## Conclusion

This review suggests discontinuation of opioids of stable patients may increase the risk of premature death. Further double-blind studies are necessary to validate potential neuroprotective properties of opioids against premature death in people with chronic pain or substance addiction.

## Acknowledgments

None.

## Conflicts of interest

Author declares there are no conflicts of interest.

## Funding

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## References

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