Comparison of a Hospital-Based 3, 5, and 7-Day Buprenorphine Microinduction Protocol

INTRODUCTION

- Buprenorphine inductions have commonly been performed in the traditional "wait, withdrawal, dose" manner. Buprenorphine microinduction has gained recent popularity because the patient does not require a period of abstinence, it may reduce the risk of precipitated withdrawal, and it allows for ongoing pain control with short-acting opioids
- There are a number of published buprenorphine microinduction protocols but the ideal length of transition from full-agonist opioid to buprenorphine is not known
- This project compared the efficacy of a hospital based 3-day, 5-day, and 7-day buprenorphine microinduction protocol

METHODS

- This small quality assurance pilot project reviewed the first 80 consecutive patients admitted to the hospital who received a newly initiated buprenorphine microinduction via a hospital-wide order set to determine which protocol would be the recommended standard approach
- During the pilot project period, earliest enrolled patients were started on the 7-day protocol with a gradual transition to mostly 3-day protocol as the team became more comfortable with initiating the microinduction.
- The primary endpoint goal was the completion of protocol defined as receiving at least two doses of buprenorphine/naloxone 4/1mg or at least one dose of buprenorphine/naloxone 4/1mg with a disposition of discharge and buprenorphine/naloxone prescription

Microinduction Protocols: Long-Acting Opioid to Buprenorphine

7 day Microinduction from Long-Acting/Short-Acting Opioids to Buprenorphine			
	Buprenorphine	**Long-acting Opioid**	**Short-acting PRN Opioids**
Day 0	None	Continued	Continued
Day 1	Buprenorphine 150mcg buccal TID	Continued	Continued
Day 2	Buprenorphine 300mcg buccal TID	Continued	Continued
Day 3	Buprenorphine 450mcg buccal TID	Continued	Continued
Day 4	Buprenorphine/naloxone 2/0.5mg film SL TID	Continued	Continued
Day 5	Buprenorphine/naloxone 2/0.5mg film SL QID	Continued	Continued
Day 6	Buprenorphine/naloxone 4/1mg film SL TID	Discontinue after first dose	If needed for pain
Day 7	Buprenorphine/naloxone 8/2mg BID-TID	None	If needed for pain

5 Day Microinduction from Long-Acting/Short-Acting Opioids to Buprenorphine			
	Buprenorphine	**Long-acting Opioid**	**Short-acting PRN Opioids**
Day 0	None	Continued	Continued
Day 1	Buprenorphine 150mcg buccal TID	Continued	Continued
Day 2	Buprenorphine 450mcg buccal TID	Continued	Continued
Day 3	Buprenorphine/naloxone 2/0.5mg SL TID	Continued	Continued
Day 4	Buprenorphine/naloxone 4/1mg film SL TID	Discontinue after first dose	If needed for pain
Day 5	Buprenorphine/naloxone 8/2mg BID-TID	None	If needed for pain

3 Day Microinduction from Long-Acting/Short-Acting Opioids to Buprenorphine			
	Buprenorphine	**Long-acting Opioid**	**Short-acting PRN Opioids**
Day 0	None	Continued	Continued
Day 1	Buprenorphine 450mcg buccal QID	Continued	Continued
Day 2	Buprenorphine/naloxone 2/0.5mg film SL QID	Continued	Continued
Day 3	Buprenorphine/naloxone 4/1mg SL QID	Discontinue after first dose	If needed for pain
Day 4	Buprenorphine/naloxone 8/2mg BID-TID	None	If needed for pain

RESULTS

Outcomes: Completion of Microinduction

7-day protocol	12/19 = 63%
5-day protocol	16/23 = 69.5%
3-day protocol	28/38 = 73.7%
Overall	56/80 = 70%

While the 3-day protocol had modestly better completion percentage compared to the 7-day or 5-day protocol, it was not statistically superior when using the Chi-Square Test

- The average maximum MME/day of opioids administered during the transition to buprenorphine in all patients was 598.5 (range: 0 - 1440) with 666 MME/day for the incomplete group and 558 MME/day for the completion group
- The average day of admission for the start for buprenorphine microinduction for all patients was 6.8 (range 1- 39). There was a significant difference day of start for the incomplete (mean = 4, SD = 5.1) and complete groups (mean = 8.07, SD= 8.6), t(60)= 2.2, p< .05.
- 50% (40/80) of the patients completed hospitalization with a discharge/transfer disposition while the other 50% left with an AMA/elopement disposition. Of the 40 patients with a disposition of discharge, 50% (20/40) completed a follow-up visit for buprenorphine maintenance.

CONCLUSION

- There was no difference in efficacy between the 3, 5, or 7-day protocol in this small pilot project. While the 3-day protocol appeared to be the most effective, it was not statistically significant
- A later start for the microinduction significantly improved outcomes which suggests a longer fentanyl washout period is beneficial
- There were no episodes of precipitated withdrawal identified by medical toxicology and/or addiction medicine attending evaluation
- While providers believed the 7-day protocol would have the best outcomes prior to initiating the protocols, this pilot project suggests a longer microinduction does not necessarily result in more successful inductions
- The addiction medicine group decided upon the 3-day buprenorphine microinduction protocol as the recommended standard approach after this project as it was no less effective than the 5 or 7-day protocol and achieved induction more quickly for admitted patients awaiting disposition

AUTHORS & DISCLOSURES

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