Interim Analysis of an Open-label, Phase 3 Study of Sufentanil Sublingual 30 mcg Tablets in the Emergency Department

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Background

Pain is the most common reason people visit the Emergency Department (ED). Studies indicate however, that ED physicians often do not provide adequate analgesia to patients as a result of time constraints, gender and age bias, opiophobia and lack of training in acute pain management.[1] Novel classes of analgesics have recently been introduced, but many patients still suffer from pain in situations where immediate intravenous (IV) access may be unavailable.[2] A sufentanil sublingual 30mcg tablet (ST30) is in phase 3 development for treatment of moderate-to-severe acute pain in emergency medicine and battlefield trauma (**Figure 1**). The product is designed to leverage sufentanil's unique pharmacokinetic and pharmacodynamic properties and could offer potential analgesic advantages in challenging venues.[3-5] The primary objective of this study is to evaluate the safety and efficacy of ST30 for management of pain in an ED setting.

Figure 1. Sufentanil Sublingual 30mcg Tablet

Methods

Study Design

- This is a multicenter, open-label study in 40 adult patients presenting to the ED with moderate-to-severe acute pain due to trauma or injury.
- Upon meeting entrance criteria, patients were administered a single dose of ST30 and remained in the study for up to 2 hours for safety and efficacy assessments.
- Patients must have reported a pain score of ≥4 on an 11-point numerical rating scale (NRS 0-10) before first dose of study drug.

Methods (Cont)

Assessments

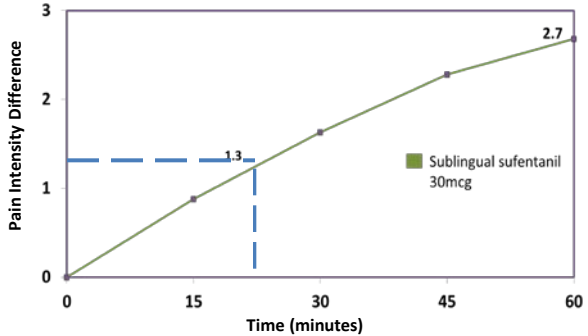
- Primary efficacy variable is the time-weighted summed pain intensity difference to baseline over the 1-hour study period (SPID1)
- Safety assessments included adverse events (AEs), vital signs, oxygen saturation and a Six-Item Screener (SIS)
- The Six-Item Screener was administered pre and post dose to assess for potential cognitive impairment.[6]

Results

Efficacy

- Forty of the 100 planned patients have been enrolled to date; mean age 42 years, 53% female
- Baseline pain intensity (mean) 8.5/10 ("severe" pain)
- Substantial reductions in Pain Intensity (mean 2.7/10) within the first hour have been recorded (**Figure 2**)
  - Literature has identified 1.3 as the minimum clinically significant change in Pain Intensity when administering an 11-pt NRS in the ED[7]
  - Mean PI decreases of 1.3 occurred within 15-30 minutes of administering one dose of sublingual sufentanil 30mcg
- Only 1 patient to date has terminated early (within the 1st hour of study) due to inadequate analgesia.

Figure 2. Pain Intensity Difference (PID) to Baseline over the First Hour



Results (Cont)

Safety

- No adverse events have been reported in 34/40 (85%) patients. Adverse events observed to date are listed in **Table 1.**
- AEs in general were mild to moderate in severity with nausea (5%) and somnolence (5%) the most common
- Early SIS results suggest no cognitive impairment caused by sublingual sufentanil 30mcg
  - mean pre-dose score was 5.7/6 vs 5.9/6 post-dose

Table 1. Interim Safety Results

Adverse Events	Sufentanil Sublingual 30mcg Total n=40 n (%)	Severity Rating
Nausea	2 (5%)	1 mild, 1 moderate
Somnolence	2 (5%)	mild
Feeling Hot	1 (2.5%)	mild
Dizziness	1 (2.5%)	mild
Disorientation	1 (2.5%)	mild
Facial Hypoesthesia	1 (2.5%)	mild
Pruritus	1 (2.5%)	mild
Vomiting	0 (0%)	NA

Conclusion

- **Early efficacy and tolerability results from this study suggest that sufentanil 30mcg tablets dispensed sublingually may offer a viable alternative to IM or IV analgesia in ED situations**
- **Nausea and somnolence have been the most commonly reported AEs to date**
- **Additional patients, treated with multiple doses are indicated to more accurately characterize the safety and efficacy profile of this therapy in Emergency Medicine**

References

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