Overview of FDA Guidances on Assessment of Abuse Potential of Drugs and Abuse Deterrent Opioids

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Abuse Liability Review in the 21st Century

1. 2000 - CSS formed, Mission, Vision, Values....
2. 2003 - Internal review procedures established
3. 2010 – Guidance on Assessment of Abuse Potential of Drugs
4. 2011 – Science Meeting on Abuse Liability
6. 2013 - Public meeting on Abuse Deterrent Products
Draft Guidance on the assessment of the abuse potential of drugs was published - January 27, 2010

Study data for scheduling and labeling for new drugs and drugs under IND

Link available on the Internet at:
Guidance in Decision-Making

Is the NME or its active metabolite(s) CNS active?
Chemistry, Receptor binding & functionality
Safety pharmacology, Toxicology studies, PK in animals

Yes

Does the NME or its active metabolite(s) have reinforcing or rewarding properties in animals or humans (Phase I)?

No

STOP

Yes

Study the reinforcing or rewarding properties and dependence liability relative to other controlled substances

For dependence liability

For relative abuse potential

Human abuse potential study

AEs/Phase I, II, III
Aberrant behaviors/Phase II, III

Nonclinical & Clinical
Signs, symptoms, severity & their similarity to other drug classes
manage symptoms of withdrawal
Additional Issues

1. Withdrawal metrics
2. Application of drug liking scales in patients
3. Improving the collection of spontaneous AE’s associated with abuse
4. Negative controls for abuse liability
5. Assessment of discontinuation symptoms in drugs lacking abuse potential
CSS completed abuse potential consults for calendar years 2012-2013

- 105 Investigational New Drug Applications (INDs).
  - 9 New Molecular Entities (NMEs).
  - The majority with novel mechanisms of action
- 34 New Drug Applications (NDAs). 4 NMEs
  - Labeling and scheduling recommendations
Draft Guidance on Abuse-Deterrent Opioid Formulations

- Types of Abuse Deterrent Formulations are described
- Post-Market Assessment of Abuse-Deterrent Features
- Describes Labeling Claims for Abuse-Deterrent Formulations
- Areas of Additional Research Needed
  - Generic drugs
  - Epidemiology of abuse
  - Statistical analysis
Three-Tier Approach For Premarket Assessment

Data in NDA that Supports Abuse Deterrent Claims:

1. Laboratory based on *in vitro* manipulation and extraction studies, syringeability, preparation of drug product for administration by other routes

2. Pharmacokinetic/Pharmacodynamic (PK/PD) studies: PD assessments may depend on route of administration

3. Human abuse liability studies and statistical analysis
Reviews

CSS Abuse Deterrent Products and Formulations Consultations

2013

IND’s – 22
NDA’s – 8
Key Messages

1. Must demonstrate that the new product be a meaningful improvement over existing product(s) in abuse liability.

2. We are looking for a dynamic improvement, not subtle or isolated study results.

3. Human PK and PD study data must be presented to support *in vitro* extraction studies. A decision tree may be helpful to the understanding of what is needed.