Myocardial ischemia – reperfusion in rats

Objectives:

Myocardial ischemia – reperfusion in rats provides a useful method to study myocardial protection using pharmacological agents. (see myocardial infarction)

Summarized methodology:

- Myocardial ischemia is induced by the occlusion of the left anterior descending (LAD) coronary artery in anesthetized animals.
- At the end of the ischemic period (if needed), reperfusion is performed by releasing the coronary suture under anesthesia.
- In the case of prolonged protocols, the rats can be allowed to recover from anesthesia after surgery.

Experimental period can vary from hours to several days-weeks according to the client's needs (figure 1).

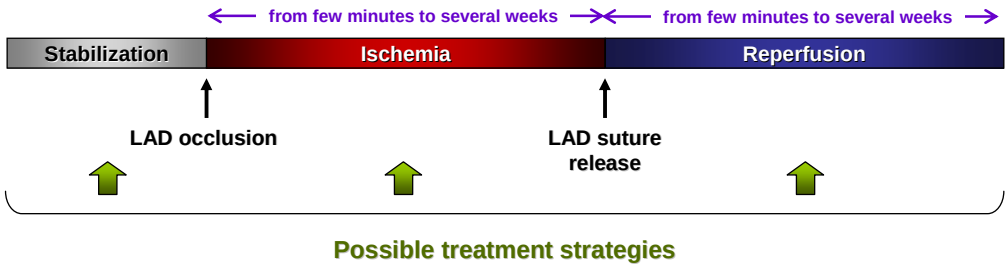

Figure 1: Summary of possible experimental designs

Endpoints:

- 24h-survival
- Infarcted area (see histomorphology and histomorphometry)
- In case of prolonged ischemia, evaluation of left ventricle remodeling and/or heart failure

Related Pelvipharm bibliography:

Non disclosable for confidentiality reasons

Links to applicable therapeutic areas / targeted disorders:

- Cardiovascular and metabolism pharmacology

* Myocardial infarction