this data, it was believed that Apadenoson would need to be administered on a weight basis, not a unit dose basis.

There are inherent limitations and opportunities for operator error when parenterally administering a pharmaceutical agent on a weight basis. This type of dosing requires calculating the amount of agent to administer based on a patient's weight, administering the calculated amount from a larger dose, and disposing of any left over agent. Thus, it is desirable and beneficial for a pharmaceutical agent to be provided in a unit dose.

SUMMARY OF THE INVENTION

In an aspect, there is provided a unit dose of Apadenoson, comprising: (a) Apadenoson and (b) a pharmaceutically acceptable carrier, wherein the unit dose is suitable for parenteral administration, wherein the amount of Apadenoson present is selected from 100 μg or 150 μg , wherein the pharmaceutical carrier includes 2% w/v β-hydroxypropyl-cyclodextrin (HP-β-CD).

The present ~~invention~~disclosure provides a novel unit dose of Apadenoson suitable for parenteral administration.

The present ~~invention~~disclosure also provides a novel method of diagnosing myocardial dysfunction using a unit dose of Apadenoson as a pharmacologic stress agent.

These and other aspects of the present ~~invention~~disclosure have been accomplished in view of the discovery that no dose response curve is seen when 1 μg/kg or 2 μg/kg of Apadenoson is administered.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows the average peak flow wire velocity of one patient from a Phase II clinical trial study. In this Phase II study in 100 patients, conducted by Dr. Morton Kern, an independent investigator at UC Irvine, adenosine was administered by intracoronary injection, and coronary blood flow velocity was monitored with a flow wire. On the left, the three injections of adenosine increased blood flow velocity consistent with the well characterized pharmacology of adenosine. On the right, increasing bolus doses of Apadenoson, at doses shown to be safe, achieved peak flow equivalent to adenosine.

Figure 2 shows the average peak flow wire velocity of 33 patients from the study described in Figure 1.

6. The unit dose of claim 1,

wherein the Apadenoson is 150 μg of Apadenoson and

wherein the pharmaceutically acceptable carrier includes:

(i) 2% w/v HP-β-CD;

(ii) sodium citrate buffer in an amount to buffer the unit dose to pH 4.8; and,

(iii) saline in an amount to form a 1-5 mL unit dose.

7. The unit dose of claim 1, wherein the volume of the unit dose is 4 mL.

8. The unit dose of claim 5, wherein the volume of the unit dose is 4 mL.

9. The unit dose of claim 6, wherein the volume of the unit dose is 4 mL.

10. The unit dose of claim 1, wherein the volume of the unit dose is 5 mL.

11. The unit dose of claim 5, wherein the volume of the unit dose is 5 mL.

12. The unit dose of claim 6, wherein the volume of the unit dose is 5 mL.

~~7. A method of preparing a unit dose of claim 1, comprising:~~

~~filling a syringe with said unit dose of Apadenoson.~~

~~8. The unit dose of claim 1, wherein the volume of the unit dose is 4 mL.~~

~~9. The unit dose of claim 5, wherein the volume of the unit dose is 4 mL.~~

~~10. The unit dose of claim 6, wherein the volume of the unit dose is 4 mL.~~

~~11. The unit dose of claim 1, wherein the volume of the unit dose is 5 mL.~~

~~12. The unit dose of claim 5, wherein the volume of the unit dose is 5 mL.~~

~~13. The unit dose of claim 6, wherein the volume of the unit dose is 5 mL.~~