

## Premature termination of a Clinical Trial

### Full title of the clinical trial

Efficacy and local tolerability of topically applied heparin (Heparin 2,400 IU/mL Cutaneous Spray) on the suitability of newly constructed primary arteriovenous fistulas in hemodialysed patients (CYT/Heparin\_01/11).

*A multicentre, randomized, double blind, placebo-controlled pilot study.*

### EudraCT Number

2011-000455-16

### Sponsor

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### Reason for premature termination of the clinical trial

Difficulties in patient recruitment. Low compliance to study medication.

### Study results

The present study aimed to evaluate the effect of topically applied heparin in comparison to placebo on the suitability of newly constructed primary arteriovenous fistulas in patients planned for hemodialysis at week 7 ( $\pm 1$  week) after first study drug administration. Considering the results of a previous study performed by Stuard et al. (2010) it appears, despite the small number of subjects included in this pilot study, that topically applied heparin may sustain AVF patency and suitability for dialysis.

The study was planned as a multicenter, prospective, randomized, double-blind, placebo-controlled clinical trial. The goal of the study was to enroll in total 56 eligible patients after giving informed consent to be assigned in equal proportions (each group 28 patients) to receive either topically applied heparin (Heparin 2,400 IU /mL Cutaneous Spray) or placebo using a computer-generated randomisation. It turned out that the recruitment of the patients was very difficult. Hence the study was terminated prematurely. In total 30 patients were screened and 24 of them were randomised in the study. Three subjects dropped-out during the study and 21 subjects completed the trial per protocol. One patient withdrew consent, another was terminated because of an SAE and the third drop-out was terminated because of incompletion to the IMP.

All study procedures were highly standardised and were performed in accordance with the clinical trial protocol and the GCP regulations. Some deviations from the clinical trial protocol occurred regarding the visit schedule and missed assessments, which were not judged as clinically relevant. Many deviations regarding the adherence to the IMP occurred during the study. 16 patients were compliant and 8 patients had difficulties to achieve the expected 80% compliance. Five of them received placebo and

three the study drug. The reason was that the sprays were difficult to handle for the patients as well as the evaluation of the compliance (weighing the bottles) was problematic for site staff.

From the results of the safety evaluation it can be concluded that Heparin 2,400 IU /mL Cutaneous Spray was well tolerated. No differences in AEs were observed between the Test and Reference treatment. In total, 130 AEs were reported, of which 11 were assessed as study drug related (probably and possibly study drug related). One AE was assessed as probably related and occurred after the Test treatment. Forty-nine AEs were reported after test treatment and 81 after reference treatment. Sixteen AEs were reported as serious adverse events, 5 SAEs occurred after test treatment and 11 after reference treatment. None of the SAEs was related to the study drug. No clinically relevant changes in the vital signs and laboratory parameters were observed. There were no new or unexpected findings observed or reported during the course of the study. The risk-benefit relationship stated prior to conduct of the present study was not affected by the results obtained.

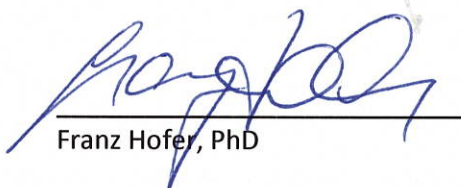
To evaluate the primary study objective, statistical considerations stated that a total of 56 patients were required to be enrolled in the study. As the study was terminated prematurely, only a total of 23 patients (Heparin: 10, Placebo: 13) could be included in the efficacy analysis. Twenty-four patients were randomised, but one patient withdrew consent one week after randomisation. Evaluation of suitability could be assessed from 10 patients of the heparin group and from 10 patients of the Placebo group. Of the evaluable patients, 7 of 10 patients of the Heparin group (70%) and 6 of 10 patients of the Placebo group (60%) were classified as "Suitability yes".

Considering the small sample size, no statistically relevant evaluation of efficacy with respect to the primary efficacy variable is applicable. In analogy, no statistically relevant statement for the secondary endpoints is applicable.

#### Date and Signature of the Sponsor's Representative

11.04.2022

Date

  
Franz Hofer, PhD