



A case report: Management of pain after subcutaneous injection of treprostinil GRP-002

Mathieu COLLOMB¹, Hélène CHEVALLARD¹, Claire CHAPUIS¹, Luc FORONI¹, Jean CALOP^{1,2}, Benoit ALLENET^{1,2}, Pierrick BEDOUCH^{1,2}

- 1 : Pôle Pharmacie, CHU de Grenoble
- 2: UJF-Grenoble 1/CNRS / TIMC-IMAG UMR 5525 / Themas, UJF

INTRODUCTION

Treprostinil is a prostacyclin analogue indicated in the treatment of Pulmonary Arterial Hypertension (PAH) for patients with functional NYHA class III. The administration is a continuous subcutaneous infusion. The recommended initiation of treatment is in intensive care with a dosage adjustment increments to a target dose.

Injection site's pain and local reactions (respectively 85% and 83% of patients) cause cessation of treatment in 8% of cases¹.

A descriptive study of a patient having pain after subcutaneous injection of treprostinil was conducted. We collected information from clinical and pharmacotherapeutic history. A systematic literature about practical considerations on subcutaneous treprostinil in pulmonary arterial hypertension was performed. At Grenoble's Hospital, management of pain due to Treprostinil includes an activity of therapeutic education managed by pharmacist, doctor, nurse belonging to different units (pharmacy, pneumology, pain's mobile team...).

CASE

Patient

43 years old idiopathic pre-capillary NYHA III PAH scalable on Bosentan and Tadalafil

08/07/11

Dose = 38ng/kg/min stage NYHA decreases on II

echocardiography: persistent right dysfunction

Pain is controlled (EVA 2) decreasing 4 days after changing site

19/05/11

right heart catheterization 80/30/50 mmHg PAP*
6-minute test walk = 544m
initial dose = 1 ng/kg/min (with aim 40 ng/kg/min)

Tolerance setting is good (EVA 3; controlled by paracetamol)

* Pulmonary Arterial Pression

Doses are increased with an increment of 1 ng/kg/min

30/05/11

Dose = 10ng/kg/min

Pain is intense (EVA 8) despite analgesic treatment (paracetamol + tramadol), application of hot/cold pockets and diclofenac gel



13/09/11

Desired dose is reached (40 ng/kg/min) Injection site changing every 3 weeks.

Pain disappears (EVA 0)
Patient does not take analgesic treatment

Effectiveness of Treprostinil's treatment is clinical and echographic



- Use of privileged sites (abdomen*, back arms*, side, upper part of the buttock, outer side of the thigh)
- Rapid abandonment unfavorable sites* (thigh)
- Site rotation every 4 weeks* (3 weeks)
- Using the first line of ice and acetaminophen*
- In the first weeks, if failure of the first line: Tramadol*, Lidocaïne topical*, Gabapentine, NSAI, anti-hemorroid cream* (vasoconstrictor)
- Alternative therapies (massage, relaxation technique*)
- Palliative care intervention*or « painkiller team »
- Psychological support* (multiple resources : family, caregivers, pharmacists, support groups)
- Therapeutic education*

CONCLUSION

- > Intense pain due to Treprostinil may require discontinuation of effective treatment.
- > This case shows that multidisciplinary care with the application of simple measures allows to manage this common side effect and to avoid the cessation of treatment.

REFERENCES

- ¹ Mathier MA, McDevitt S, Saggar R. Subcutaneous treprostinil in pulmonary arterial hypertension: Practical considerations . J Heart Lung Transplant. 2010; 29: 1210-7
- ² Bedouch et al. Pharmacists involved in patient education: a pharmacist collaborative care program for pulmonary arterial hypertension. Int J Clin Pharm. 2011; 33: 898-901