EMA Approval of Afamelanotide For Rare Light Intolerance EPP
First Ever CHMP Patient Involvement

Jasmin Barman-Aksözen[1,2,3], Rocco Falchetto[2]

1 Institute of Laboratory Medicine, Triemli Hospital, Zurich – Swiss Porphyria Center
2 Swiss Society for Porphyria; SGP
3 German Society for Erythropoietic Protoporphyria (EPP); Selbsthilfe EPP

- **Erythropoietic protoporphyria (EPP)** is an inborn and extremely painful intolerance to visible light.
- The **α-MSH analogue afamelanotide** induces skin tanning, which prevents visible light to enter the skin.
- Phase II and III trials with over 350 EPP-patients have demonstrated Scenesse® (afamelanotide) to be **safe and effective**.
- As EPP is a very complex disease, study design was difficult and results did not match the **real life benefit** experienced by patients. Therefore, in 2014 EPP-patients were invited by the **European Medicines Agency (EMA)** to participate at a «Scientific Advisory Group (SAG)» meeting and, later, to give their testimonies at a meeting of the **«Committee for Medical Products for Human Use (CHMP)»,** providing their unique perspective for the drug's benefit-risk assessment.
- Patients' inputs contributed to the treatment's **approval under exceptional circumstances** at the end of 2014.
- Despite 2014 approval, **EPP sufferers in the EU are still anxiously waiting** for the treatment as pharmacovigilance post-authorisation safety study (PASS) requirements have yet to be defined.

Erythropoietic Protoporphyria (EPP)

- **After minutes**: Excruciating neuropathic pain and burns up to second degree due to visible range of sunlight and artificial light


- Incidence of EPP is 1:100.000
- Socially disabling, impact on professional life
- Initially no visible skin manifestations, despite severe pain: «malingerers»

- Symptoms start in early childhood, diagnosis typically after years
- Other than afamelanotide no therapeutic alternatives available [1]

Afamelanotide in EPP

- **Hours** of sunlight exposure enabled!
- Almost **normal life**
- Slow release **implant** formulation (Scenesse®)

Afamelanotide

- Induces moderate skin tanning → **Protection**

Patients consistently report overwhelming benefits:

«I am able to practice outdoors sports now and was able to resume my sports instructor education»

«Sun can be warm and pleasant!»

«**This treatment changed my life**»

Results AfamelanotideTrials

Difficult study design – Highly variable parameters:

- High inter-individual variability in ability to tolerate sunlight/pain
- Mutable weather conditions → Pain triggers widely vary
- Real life environment: office hours, occupation, etc.
- Methods to determine efficacy had to be developed
- Although very hard to measure, several phase II and III clinical trials showed **small but reproducible efficacy** and a very benign safety profile [2-6]
- Patients report not small but **significant efficacy**

Influence of functional unblinding (tanning) highly unlikely:

- β-Carotene used since the 70s turns skin yellowish, but has no demonstrated benefit [1]
- Long term treatment with afamelanotide showed up to 8 years efficacy/>90% treatment adherence → Effect not due placebo [6]

EMA Approval

24 October 2014
EMA/638997/2014
Press Office

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

Press release

Scenesse recommended for rare disease that causes intolerance to sunlight

Patients involved in discussions on benefits and risks of a medicine at CHMP for the first time

The European Medicines Agency has recommended granting a marketing authorisation under exceptional circumstances for Scenesse (afamelanotide) for the prevention of phototoxicity in adults with erythropoietic protoporphyria (EPP), a rare genetic disease which causes intolerance to light. Scenesse is the first medicine for patients with this condition.

[7]

Conclusion

- The real life benefit of afamelanotide becomes evident only by listening to patients' first-hand experience.
- As patients are the beneficiaries of new drugs and are the ones having to bear the potential risks, their evaluation of the efficacy and side effects of a drug should be central to the decision making process.
- More standardised procedures of patient integration and involvement at every stage of drug research and development, including post-marketing pharmacovigilance, should be established, granting patients a more active and empowered role.

References:
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