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Committee for Medicinal Products for Human Use (CHMP)

DaTSCAN

(ioflupane (^{123}I))

Procedure No. EMEA/H/C/266/P45 011

CHMP assessment report for paediatric use studies submitted according to Article 45 of the Regulation (EC) No 1901/2006

Assessment Report as adopted by the CHMP with all information of a commercially confidential nature deleted

Disclaimer: The assessment report was drafted before the launch of the European Medicines Agency's new corporate identity in December 2009. This report therefore has a different appearance to documents currently produced by the Agency.

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I. INTRODUCTION

On 03/10/2008, the MAH submitted 3 published paper thought to be paediatric study for DaTSCAN, in accordance with Article 45 of the Regulation (EC)No 1901/2006, as amended on medicinal products for paediatric use.

The MAH stated that the submitted paediatric study does not influence the benefit risk for DaTSCAN and that there is no consequential regulatory action.

In addition, the following documentation has been included as per the procedural guidance:

- An annex II including SPC

II. SCIENTIFIC DISCUSSION

II.1 Information on the pharmaceutical formulation used in the clinical study(ies)

None

II.2 Non-clinical aspects

None.

II.3 Clinical aspects

1. Introduction

The MAH submitted The MAH have submitted 4 published references

2. Clinical study(ies)

Use in Adult Tourettes

Dopamine transporter binding in Gilles de la Touresttе syndrome: a [^{123}]FP-CIT/SPECT study. Serra-Mestres: J Acta Psych 2004

Background There have been conflicting studies in Tourettes with some PET and SPECT studies suggesting involvement of the striatal DOPA system and others being negative. Two PET studies have shown an increase in dopamine re-uptake sites and DOPA decarboxylase activity using [C^{11}]WIN 35 428 and [^{18} F]-DOPA respectively and more recent ones using SPECT.These have been supported by postmortum studies which also suggest increased dopamimergic innervation within the striatum.

Study The study included 10 neuroleptic naïve Tourettes (1 had neuroleptic >1 year previously) and 10 normal controls they received approximately 185 MBq of [^{123}]FP-CIT. The age range was 18-64 years old. The methods used were able to give better definition to the different areas of the striatum distinguishing between caudate and putamen. It is not known if the increased binding is a primary or secondary problem.

Results The Tourettes group showed higher binding in the caudate and putamen nuclei. The population of adult Tourettes studied may be atypical as it was recruited from a tertiary centre and likely to be severe.

Reproducibity of a Standardized Quantitative Analysis Using Fixed Reions of Interest to Differentiate Movement Disorders on ^{123}I-FP-CIT/SPECT. Marcel PM J Nuclear Medicine Technology 2007

Background
Study this was a study of 52 adult patients (range 17-80 years) with clinical diagnoses of Parkinson's disease (n=21), hypokinetic rigid syndrome (19), dystonia (8) or essential tremor (4). The results from 2 different nalytic techniques were studied. Previous studies have used a dedicated cerebral camera. This study examines whether a non-dedicated camera can be reliably used in clinical practice.

Results PD patients had lower ratios than the other groups. The final clinical diagnosis of the patients was established by a 2-year follow-up. A semi-automated technique gave more reliable results between technicians than a manual approach.

SPECT imaging of the dopamine transporter in juvenile onset dystonia. O'Sullivan J: Neurology 2001.

Single case report of a clinically atypical dopa-responsive dystonia in a 22-year old with a normal study confirming that this was not a case of Juvenile parkinsonism. The diagnosis of dystonia was confirmed by family history and phenylalanine loading test.

Imaging of dopaminergic dysfunction with ^{123}I-FP-CIT/SPECT in early-onset parkin disease. Varrone A: Neurology 2004

Background The paper refers to 2 earlier studies in parkin subjects one that was negative and one that showed an increase in severity of scan results.

Study The study investigated whether the presence of the parkin gene in early onset parkinsons resulted in different scanning results. A total of 18 patients with early-onset Parkinsons were studied (9 with parkin gene, 9 without). The patients were aged 22-45 years.

Results The subjects with the parkin gene showed a greater symmetry and a greater degree of niagrostriatal impairment compared to clinical severity than the non-parkin subjects.

3. Discussion on clinical aspects

There were 3 studies submitted (2 early onset PD and 1 adult Tourette's) and 1 case report. The studies and case report were all conducted in adult and not paediatric patients. The references are not relevant to a paediatric submission.

III. RAPPORTEUR'S OVERALL CONCLUSION AND RECOMMENDATION

- **Overall conclusion**

Overall Conclusion
Tourettes The published paper is a first step in delineating changes in an adult population of Tourettes. The evidence submitted in this paper does not warrant any change to the SPC.
Parkinsons disease This was an adult study of using a non-dedicated camera technique and does not require SPC update.
Dopa-responsive dystonia A single case report which does not warrant any change to the SPC.
Early-onset parkin disease Although some differences in scan results between parkin and non-parkin patients were seen, clear discriminatory thresholds have not been established. In addition the consistency of these differences have not been robustly demonstrated with increased severity of scanning changes apparently noted in only 2/3 studies and symmetry in 1/3 studies according to the published paper. The evidence submitted in this paper does not warrant any change to the SPC.

- **Recommendation**

x Fulfilled –

No further action required

IV. ADDITIONAL CLARIFICATIONS REQUESTED

Not applicable