Correction of an important typographical error in the European Association of Nuclear Medicine (EANM) guidelines

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Dear Sir,

Complete thyroid blockade is required prior to the administration of ^{131}I -metaiodobenzylguanidine (^{131}I -MIBG). Insufficient iodine prophylaxis may increase long-term adverse effects, especially the development of hypothyroidism or thyroid malignancy [1, 2].

The European Association of Nuclear Medicine (EANM) procedure guideline for ^{131}I -MIBG therapy includes information about performing this treatment and dosing recommendations to achieve thyroid blockade using a range of oral stable iodine presentations [3].

Table 1 in the EANM procedure guideline recommends Lugol's Solution 1% 40 drops (being 20 drops twice daily) for thyroid blockade. All concentrations of Lugol's Solution are presumed to contain approximately 20 drops in 1 ml as they are aqueous solutions. A dosage of 40 drops Lugol's Solution 1% would contain 52 mg iodine, which is approximately *half the recommended amount of iodine required for an adult to achieve complete thyroid blockade* [4, 5].

In order to administer equivalent iodine quantities as other agents in Table 1, a dosage of 40 drops (20 drops twice daily) of Lugol's Solution 2% would be required.

Lugol's Solution contains 5% iodine and 10% potassium iodide in aqueous solution. Lugol's Solution is also known as Aqueous Iodine Oral Solution BP 2011 or Strong Iodine Solution USP 34 [6]. In Australia, our pharmaceutical formulary contains the formula for Lugol's Solution [7]. This solution contains 130 mg/ml total iodine [6].

The use of various concentrations of Lugol's Solution has become accepted practice in a number of countries. Great care is required to ensure an understanding of the formulation of

the solution when a percentage concentration is used. When terms such as % are used it is important to state the dimensionless quantity whose value is being specified [8]. Scientifically, a percentage concentration of a solution refers to a quantity of solute in a definite volume of solution. However, concentrations of Lugol's Solution refer to the concentration of iodine contained in the solution, not the total iodine content.

Pharmacists may assist with clarification of concentrations such as the amount of iodine present in various formulations, based upon their training in pharmaceuticals and their familiarity with the composition of solutions.

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