Iodine Dye Spray for Endoscopy - Summary Clinical Guideline

Reference no.: CG-ENDO/2023/010

1. Introduction

Squamous dysplasia is hard to detect with standard endoscopic techniques using white light. Also the full extent of dysplasia is not generally visible using standard white light endoscopy. Aqueous iodine solutions can be used to delineate areas of dysplasia or cancer in the squamous mucosa of the oesophagus. This guideline outlines indications and the practical application of this technique.

2. Aim and Purpose

You should know when to use iodine dye spray in the oesophagus and how to use it.

3. Definitions, Keywords

Lugol's iodine- Schiller's iodine, these are aqueous iodine solutions used as vital stains.

4. Main body of Guidelines

Aqueous iodine (Lugol's solution or Schiller's Iodine) : These are iodine-based absorptive stains that have an affinity for glycogen in non-keratinized squamous epithelium. It is used primarily for identifying and delineating squamous dysplasia and early squamous cell cancer of the oesophagus.

Indications for use of aqueous iodine dye spray.

- Suspected squamous dysplasia found at diagnostic endoscopy
- delineation of dysplasia prior to endoscopic mucosal resection.
- Follow up following previous endoscopic mucosal resection or endoscopic submucosal dissection.
- Screening of patients with known oropharyngeal squamous cancer.

<u>Method : Iodine Dye Spray for Squamous dysplasia at endoscopy</u>

- dilute iodine to between 1% and 3%. and draw up in a 10 ml syringe x2
- Prepare the oesophagus by use of a thorough jet wash to remove any mucus or debris.
- Approximately 20 to 30 mL of 1% to 3% aqueous iodine solution is sprayed ontothe full length of the oesophageal mucosa using a dye-spray catheter.

(Lugol's or alternatively Schiller's iodine. Schiller's is available in the trust which is O.33% iodine and 0.66% potassium iodide),

Interpretation. On staining, the normal oesophagus promptly undergoes a dark green–brown to black discoloration that gradually fades over several minutes.

Glycogen-depleted areas such as dysplasia, squamous cell carcinoma, Barrett's epithelium, and inflammation remain unstained or weakly stained. (see illustrative photograph). Biopsy or endoscopic resection can be targeted on the non staining dysplastic area.