**South East London Area Prescribing Committee**
**Formulary recommendation**

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| **Reference:** | **071** |
| **Intervention:** | **Botulinum toxin type A injection for the treatment of achalasia**<br>(Botulinum toxin is a protein complex derived from the bacterium clostridium botulinum) |
| **Date of Decision:** | **June 2017** |
| **Date of Issue:** | **July 2017** |
| **Recommendation:** | **Red – suitable for prescribing and supply by the hospital only** |
| **Further Information** | • Botulinum toxin is accepted for use in SEL for the treatment of achalasia, if the following criteria are fulfilled:<br>(i) Confirmed diagnosis of achalasia via oesophageal manometry studies<br>(ii) Approval from the local oesophageal MDT<br>(iii) Restricted to use in patients where treatment with surgery or pneumatic dilatation is contra-indicated or not appropriate.<br>• A total dose of 100 units will be used via endoscopic injection into the lower oesophageal sphincter (usually 25 units per quadrant)<br>• Where treatment is effective, botulinum toxin type A injections may be repeated at a minimum of 4 monthly intervals as required. In practice, the dosing interval may be significantly longer than this and will depend on recurrence of symptoms.<br>• If treatment is not effective after the first dose, the treatment will not be repeated.<br>• Botulinum toxin type A injection is a tariff excluded, CCG commissioned medicine for this indication and will be classified as a B* medicine locally.<br>• A **B* notification form will need to be completed** and submitted to commissioners for each patient treated with botulinum toxin for achalasia in order for the cost of the medicine to be reimbursed to the Trust.<br>• Only the most cost-effective brand of botulinum toxin type A injection will be commissioned for use in this indication, taking into account any locally negotiated prices.<br>• **Note:** at the time of writing, there are no brands of botulinum toxin type A injection licensed for the treatment of achalasia, and patients should be made aware of this before treatment is started. |
| **Shared Care/ Transfer of care required:** | N/A |
| **Cost Impact for agreed patient group** | • It is estimated that there will be approximately 25 patients across SE London per annum suitable for treatment.<br>• Assuming treatment is with the most cost-effective brand (Xeomin®) the cost of treatment with 100 units every annum (average requirement for repeat injections), would be £96 per patient per annum. As an upper limit, if all patients received three doses a year (worst case scenario), the drug cost impact would rise to £288 per patient per year.<br>• This would result in a total cost impact across SEL of between £2,400 to £7,200 per annum.<br>• This does not include activity related costs from the appointments to administer the injections, however some of this spend would be offset by a reduction in the usage of pharmacological treatments for this condition, e.g. calcium channel blockers and nitrates. |

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| **Usage Monitoring &Impact Assessment** | **Acute Trusts:**<br>• Monitor usage and report back to the APC when required.<br>• Audit as required by commissioners to ensure use is in line with this recommendation. |
| | **CCGs:**<br>• Monitor monthly tariff excluded high cost drugs invoicing submitted by Trusts to the NEL CSU to ensure billing of the most cost effective product |
| **Evidence reviewed** | **References (from evidence review)**<br>1. Malas A et al. Esophageal spasm. Medscape clinical reference. Available online here at: (accessed 30/05/2017)<br>2. Spechler S. Classification of oesophageal motility abnormalities. Gut 2001 **49** p145-151<br>3. Floch M et al. Esophageal motility disorders. Netters Gastroenterology 2nd edition Pa Saunders 2010 Chapter 14<br>4. Perioral endoscopic myotomy (POEM) for achalasia – guideline in development GIDIP1229. Available online here at: (accessed 30/05/2017)<br>5. Roman S, Kahrilas P. Distal oesophageal spasm. Dysphagia 2012 27 p115-123.<br>6. American College of Gastroenterologists guideline: Diagnosis and management of achalasia. The America Journal of Gastroenterology 2013 doi: 10.1038/ajg.2013.196<br>7. Diagnosis and management of esophageal achalasia. British Medical Journal 2016 (online);354:i2785.<br>8. Pasricha P, ravich W, Hendrix T et al. Intersphincteric botulinum toxin for the treatment of achalasia. NEJM 1995 **332** (12) p774-778<br>9. Bassotti G, Annese V (1999) Review article: pharmacological options in achalasia. Aliment Pharmacol Ther 13:1391-1396<br>10. Martinek J, Siroky M, Plottova Z, Bures J, Hep A, Spicak J (2003) Treatment of patients with achalasia with botulinum toxin: a multicenter prospective cohort study. Dis Esophagus 16:204-209<br>11. Pasricha P J, Rai R, Ravich W J, Hendrix T R, Kalloo A N (1996) Botulinum toxin for achalasia: long-term outcome and predictors of response. Gastroenterology 110:1410-1415<br>12. Leyden J, Moss A, MacMathuna P et al. Endoscopic pneumatic dilatation versus botulinum toxin injection in the management of primary achalasia. Cochrane Database of Systematic Reviews 2014.<br>13. Annese V, Bassotti G, Coccia G, Dinelli M, D'Onofrio V, Gatto G, Leandro G, Repici A, Testoni P A, Andriulli A (2000) A multicentre randomised study of intrasphincteric botulinum toxin in patients with oesophageal achalasia. GISMAD Achalasia Study Group. Gut 46:597-600<br>14. Annese V, Bassotti G, Coccia G, D'Onofrio V, Gatto G, Repici A, Andriulli A (1999). Comparison of two different formulations of botulinum toxin A for the treatment of oesophageal achalasia. The Gismad Achalasia Study Group. Aliment Pharmacol Ther 13:1347-1350<br>15. Vanuytsel T, Bisschops R, Farre R et al. Botulinum toxin reduces dysphagia in patients with nonachalasia primary esophageal motility disorders. Clinical gastroenterology and hepatology 2013 11 p1115-1121<br>16. Miller L, Sujata V, Puella M et al. Treatment of chest pain in patients with noncardiac, nonreflux, nonachalasia spastic esophageal motor disorders using botulinum toxin injection into the gastroeosphageal junction. The American Journal of Gastroenterology 2002 97 (7) p1640-1646<br>17. Storr M, Alescher H, Roesch T et al. Treatment of symptomatic diffuse esophageal spasm by endoscopic injections of botulinum toxin: A prospective study with long-term follow-up. Gastrointestinal endoscopy 2001 54 (6) p754-759<br>18. van Hoeji F, Tack J, Pandolifino J et al. Complications of botulinum toxin injections for treatment of esophageal motility disorders. Diseases of the esophagus 2017 **30** p1-5 |

**NOTES:**

a) Area Prescribing Committee recommendations and minutes are available publicly on member CCG websites.

b) This Area Prescribing Committee recommendation has been made on the cost effectiveness, patient outcome and safety data available at the time. The recommendation will be subject to review if new data becomes available, costs are higher than expected or new NICE guidelines or technology appraisals are issued.

c) **Not to be used for commercial or marketing purposes. Strictly for use within the NHS.**