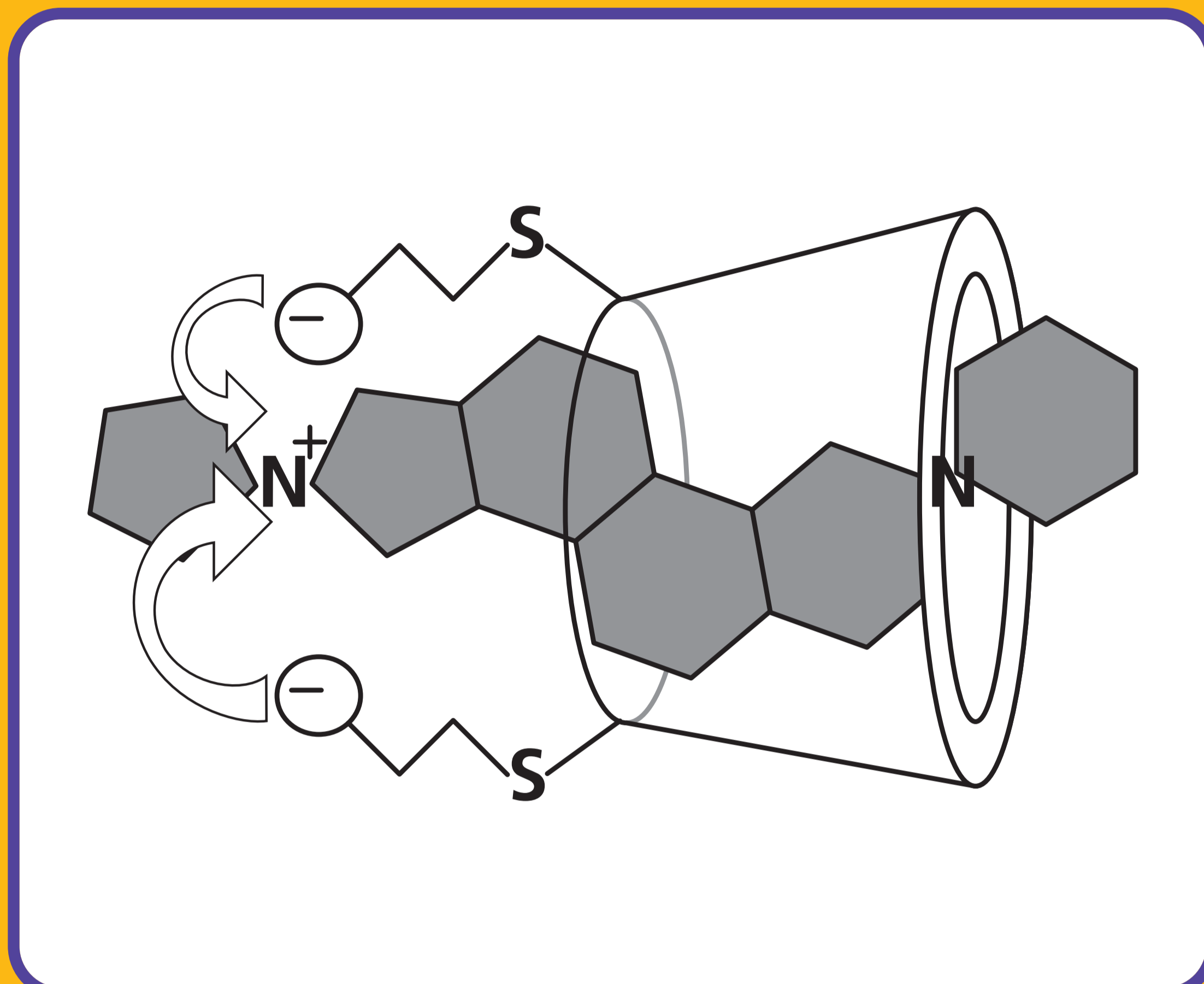
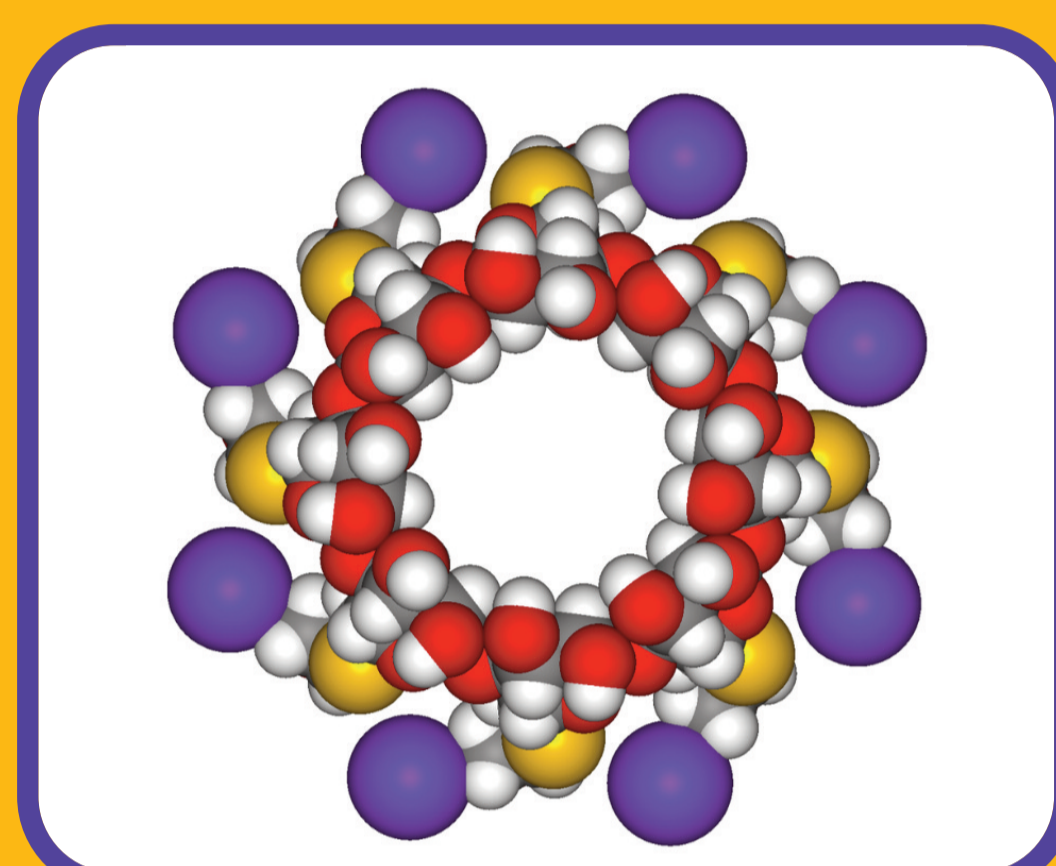
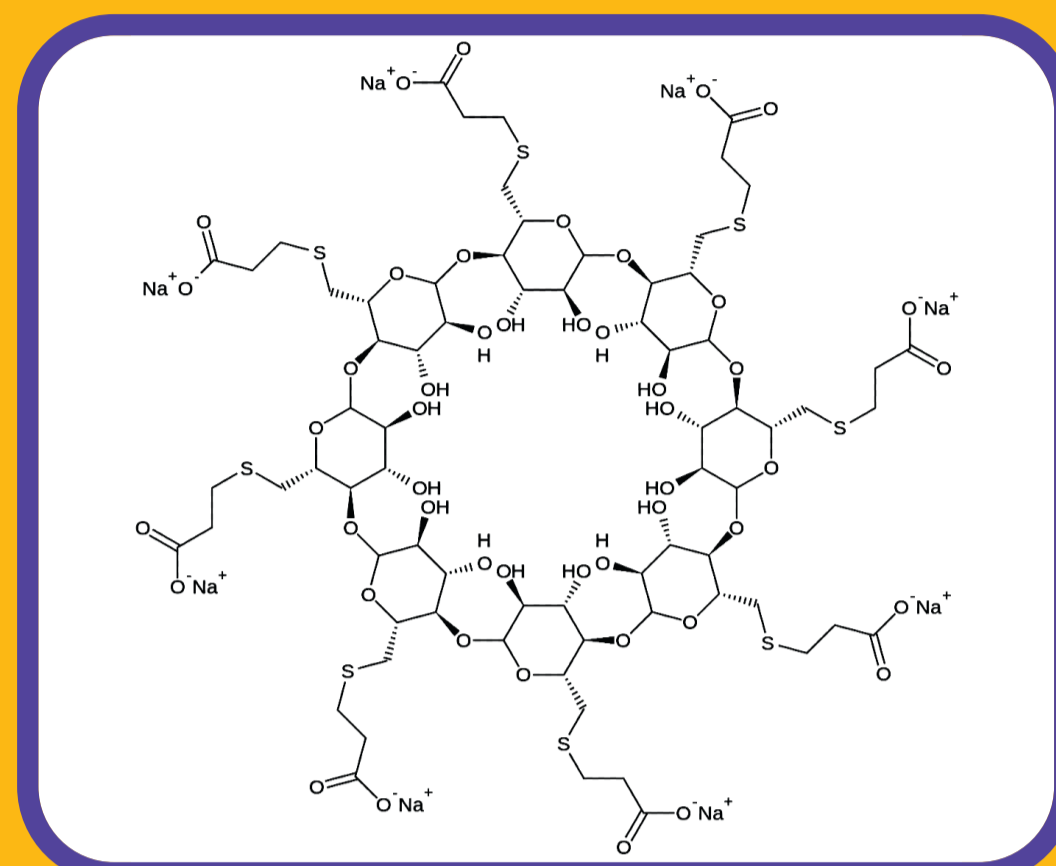


Departmental guidelines for the use of sugammadex: is there really a need? A service evaluation study

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Introduction

Sugammadex (Bridion), a modified gamma-cyclodextrin, is the first selective relaxant binding agent indicated to reverse the neuromuscular blockade induced during general anaesthesia. Whilst its clinical effectiveness is rarely disputed, issues arise within departments and Trusts from the lack of consensus regarding its specific roles in therapy and its large cost impact. Attempts were therefore made through this service evaluation study to clearly define the role of sugammadex at the Royal National Orthopaedic Hospital (RNOH) to enable a local guideline as well as to reduce the anaesthetic and pharmacy departmental expenditures by ensuring consultant responsibility for each vial.

Method

From March to April 2015, questionnaires were sent to all 27 anaesthetic consultants to identify their usual neuromuscular blocking agent, their experience with sugammadex and, importantly, their views on which clinical scenarios would require the use of sugammadex most of the time. Common clinical scenarios were identified from research and other guidelines. The qualitative data

would then assist in defining a guideline for the RNOH. To encourage appropriate use, vials of sugammadex, (previously freely requested), required the need for a named consultant. The number of vials supplied by pharmacy was then analysed over two 3-month periods retrospective and prospective to this change to see if demand was affected.

Results

Of the 27 anaesthetic consultants employed during the study, 22 completed and returned their questionnaires, of whom 19 regularly used an aminosteroid (either rocuronium or vecuronium). Of these 19, over 75% felt that all suggested clinical scenarios were indications that required sugammadex most of the time. The scenarios can be seen in table 1. Additional clinical scenarios not listed but offered by responders included short procedures, PONV, gastric reflux and remote scanning. Over a three month period from December 2014 to February 2015, 365 vials were supplied for use. However once a named consultant had to take responsibility (May to July 2015), only 159 vials were requested. This is more than a 50% drop in the usage of sugammadex.

Table 1. Clinical scenarios with >75% positive responses on need for sugammadex most of the time

Clinical scenario	Number of positive responses
BMI > 30	15/19
BMI > 40	17/19
COPD and other chronic respiratory diseases	15/19
HR > 120	17/19
Hx of SVT	18/19
Children/Infants	15/19
Over 75yr olds	16/19
Repeated doses of NMBD	17/19
Reversal of profound NMB	19/19
NM disease	17/19

Discussion

The clinical scenarios chosen by the RNOH anaesthetic consultants mirror other departmental sugammadex guidelines although are more extensive. Producing this more complete list of indications as a guideline may be beneficial for the anaesthetic department in producing clearer definitions as well as an appreciation into the need for sugammadex for our orthopaedic population. However, this may prove costly as with more indications there will presumably be more use. Yet, following the simple decision to request the

responsibility of a named consultant, usage and thereby cost has dropped. It therefore appears that responsibility is as significant as the need for appropriate local guidelines into the indications for sugammadex which are in the process of being produced. Further research is required to compare whether reasons for the use of sugammadex in theatre still equates to those indications mentioned prior to the need for responsibility as this may reduce our list of indications.

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