Anophthalmic Surgery- A Trainee Perspective

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Background/Introduction

- Access to anophthalmic surgical training is difficult owing to the relative rarity of the procedures
- Meredith et al. (ePoster BOPSS 2019) reported a year on year decrease in the number of eye removal operations nationally since 2001
- A 5 year analysis of eye removal surgery in the North East by Kishikova et al. (ePoster BOPSS 2019) found only 1 eye removal surgery, undertaken by an Oculoplastic Consultant, had been performed out of hours
- The current OST curriculum states that trainees should "be able to perform enucleation and evisceration", and to demonstrate this with the submission of 2 practical assessments on a minimum of 2 cases, although this is under review
- We set out to establish the experience and attitudes of OST trainees in the Northern Deanery towards anophthalmic surgery training

Methods

14- item questionnaire (Fig.1) with multiple choice, free-form and VAS components were distributed to the OST trainees of the Northern Deanery in Spring 2019. Descriptive statistics were obtained using GraphPad Prism 8.0.2

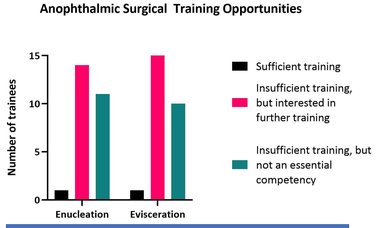
NETRiON 2018 Anophthalmic Surgeries Questionnaire for Trainees

- What is your current stage of training?
- Do you have an area of subspecialist interest?
  - Oculoplastic Surgery
  - Other
- Have you performed any enucleations during your training?
  - Cadaveric
    - If yes, how many cases?
  - Patient
    - If yes, how many cases?
- Have you performed any evisceration during your training?
  - Cadaveric
    - If yes, how many cases?
  - Patient
    - If yes, how many cases?
- At which stage of training did you perform your first enucleation?
- At which stage of training did you perform your first evisceration?
- How confident are you in performing independent enucleation (1 being not at all confident, 10 very confident)?
  1 2 3 4 5 6 7 8 9 10
- How confident are you in performing independent evisceration (1 being not at all confident, 10 very confident)?
  1 2 3 4 5 6 7 8 9 10
- Do you think enucleation should be part of the core OST curriculum?
  - If yes:
    - Cadeveric
    - Patient
    - Both
- Do you think evisceration should be part of the core OST curriculum?
  - If yes:
    - Cadeveric
    - Patient
    - Both
- How many cases of enucleation do you think one should perform in order to be sufficiently confident to perform this independently?
- How many cases of evisceration do you think one should perform in order to be sufficiently confident to perform this independently?
- Do you think you have had enough opportunities to perform enucleation in your training to date?
  - Yes
  - No and I would like more opportunities
  - No and I do not feel this competency is essential for a general ophthalmic consultant
- Do you think you have had enough opportunities to perform enucleation in your training to date?
  - Yes
  - No and I would like more opportunities
  - No and I do not feel this competency is essential for a general ophthalmic consultant

Figure 1- Questionnaire

Results

26 of 29 trainees responded to the survey, including 19 junior trainees (OST 1-4) and 7 senior trainees (OST 5-7).



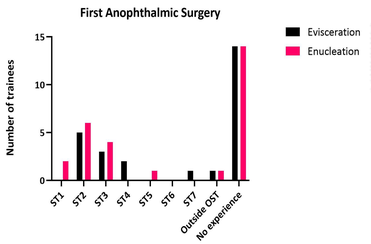


Figure 2- 1 trainee out of 26 surveyed reported sufficient training to date in enucleation and evisceration. 14 trainees expressed interest in further training in enucleation, and 15 expressed interest in further training in evisceration

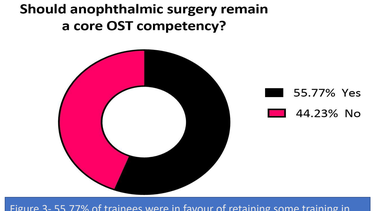
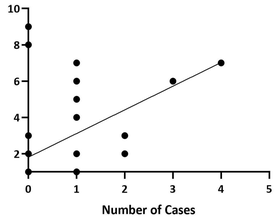


Figure 3- 55.77% of trainees were in favour of retaining some training in anophthalmic surgery with 15 out of 26 trainees in favour of retaining evisceration, and 14 out of 26 trainees in favour of retaining enucleation as a core OST competency

	Evisceration	Enucleation
ST1	0	2
ST2	5	6
ST3	3	4
ST4	2	0
ST5	0	1
ST6	0	0
ST7	1	0
Outside OST	1	1
No experience	14	14

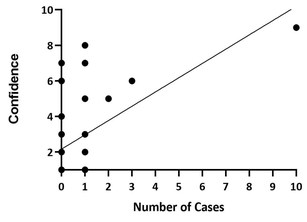
Figure 4- 14 of 26 trainees reported no clinical experience with evisceration or enucleation. The majority of trainees who had performed an evisceration or enucleation recorded their first procedure in OST 2.

A Influence of Cadeveric Simulation on Confidence to Perform Anophthalmic Surgery



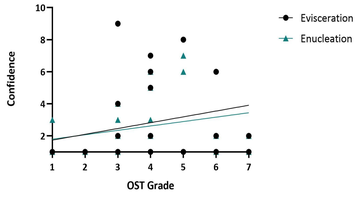
Spearman r	
r	0.5916
95% confidence interval	0.3730 to 0.7480
P value	
P (two-tailed)	<0.0001
P value summary	****

B Influence of In Vivo Experience on Confidence to Perform Anophthalmic Surgery



Spearman r	
r	0.4687
95% confidence interval	0.2166 to 0.6622
P value	
P (two-tailed)	0.0005
P value summary	***

C Influence of OST Grade on Confidence to Perform Anophthalmic Surgery



	OST Grade vs. Evisceration	OST Grade vs. Enucleation
Spearman r		
r	0.4542	0.3768
95% confidence interval	0.06916 to 0.7215	-0.02448 to 0.6735
P value		
P (two-tailed)	0.0197	0.0578
P value summary	*	ns

Figure 5 -a Cadaveric simulation experience correlated positively with confidence to perform enucleation and evisceration- combined data shown. b In Vivo experience positively correlated with confidence to perform evisceration- combined data shown.c OST grade positively correlated with confidence when the responses for enucleation and evisceration were combined.

19.2% of trainees(5/26) stated that they felt confident to perform enucleation, which did not correlate with grade of trainee (Fig 5c). 23% (6/26) of respondents reported feeling confident to perform evisceration, and this did correlate positively with both seniority (Fig 5c) and surgical experience (Fig 5a & b).

Discussion

- Majority of trainees reported insufficient exposure to enucleation/evisceration surgery during training, with low self-reported confidence in performing independent anophthlamic surgery
- Enthusiasm for further training, both cadaveric and in clinical practice was expressed
- Confidence was positively correlated with cadaveric simulation and clinical experience, this may be confounded by experience outside training, or more junior trainees with a strong interest in Oculoplastic Surgery
- A significant proportion questioned whether this skill should continue to be included as a general ophthalmic competency in OST, given the dwindling number of cases and that, in our region, eye removal surgery is almost exclusively performed by oculoplastic trained surgeons (Kishikova et al., BPOSS 2019)
- These findings demonstrate trainee support for the proposed restructuring of oculoplastic surgical skills assessment within the Draft OST Curriculum, with evisceration and enucleation surgical competency assessment moving to Level 4 or sub-speciality interest

Trainee Comments:

"Useful to learn, but limited access to cases for training"
"Requires adequate counselling and specialist consultant"
"Outcomes better when performed by an experienced surgeon"
"As a patient I would prefer a specialist rather than a general ophthalmologist"
"Rarely done by general ophthalmologists, unlike Temporal Artery Biopsy"