# Ophthalmologists Experience and Level of Confidence in Obtaining a Vitreous Biopsy with a Needle and Vitrector in Patients with Acute Endophthalmitis

NHS
The Newcastle Upon Tyne Hospitals NHS Foundation Trust

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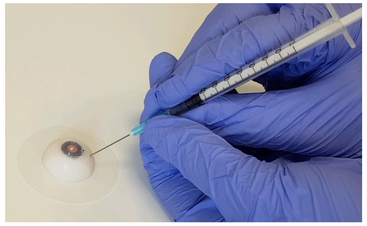
**Purpose**: Vitreous sampling in acute endophthalmitis can either be obtained with needle aspiration or biopsy using a vitrector. This survey of trainee and consultant Ophthalmologists aims to give an overview of experience and the level of confidence with these core skills and assesses the efficacy of a short instructional video on improving confidence in trainees.

**Methods:** A 10 question questionnaire was given to Ophthalmologists at a regional University teaching hospital and the anonymous results compiled. Some questions asked the respondent to rate their confidence from 1 to 5




**Results**:
20 questionnaires were fully completed; 10 from consultants and 10 from specialist trainees (2 trainees ST1-2 and 8 trainees ST3-7).
50% of trainees and 40% of Consultants were confident in making up intravitreal antibiotics

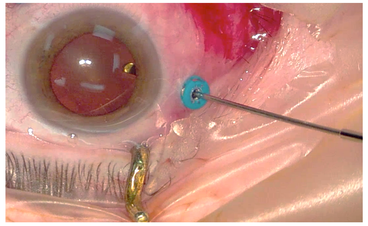
VITREOUS BIOPSY WITH A NEEDLE



**Number performed (mean):**
Consultants: **7.4**
Trainees: **1.3**

**Level of confidence in performing (1-5):**
Consultants: **3.6**
Trainees: **2.8**

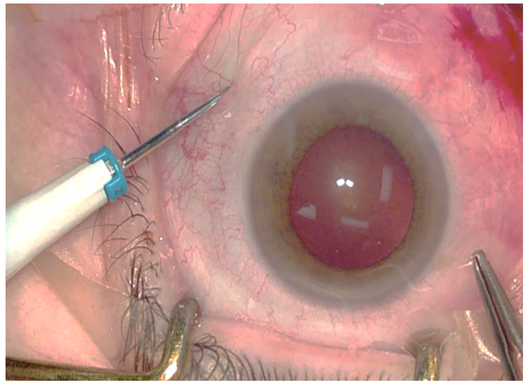
VITREOUS BIOPSY WITH A VITRECTOR



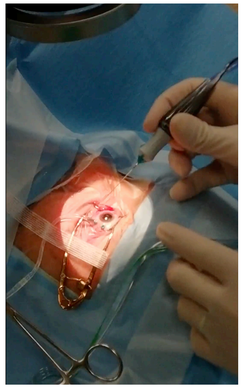
**Number performed (mean):**
Consultants: **6.0**
Trainees: **0.8**

**Level of confidence in performing (1-5):**
Consultants: **4.0**
Trainees: **1.9**

**A 5 MINUTE INSTRUCTIONAL VIDEO WAS THEN SHOWN [See additioonal video file for video]**









After a 5-minute instructional video on obtaining a vitreous sample using a vitrector 10 trainees were then asked to complete the same questionnaire. Confidence rating increased from **1.9** before the video to **4.0** after the video.

**Discussion**
Obtaining a vitreous biopsy is an essential step in the management of post operative endophthalmitis. The sample can be obtained using a needle but due to the higher incidence of dry taps, obtaining a sample using a vitrector is often recommend and some see this as a key skill that all ophthalmologists should be confident in carrying out independently.
It is hypothesised that due to the increased safety and reduced complication rate of intraocular surgery both the experience and confidence in obtaining a vitreous sample in trainees is low.
With procedures which occur uncommonly and unpredictably we believe that the format of video teaching is an excellent way to learn such skills.
Our study shows that a short summary video of the steps involved substantially increases trainees confidence in the procedure.
Within our department the video has become incorporated into the endophthalmitis guidelines and allows surgeons to remind themselves of the steps prior to carrying out the procedure. Summary sheets of the video and machine settings were also made, which were kept in all theatres and used as a reference when performing the procedure.

**Conclusions**: Both experience and confidence levels in obtaining a vitreous sample and giving intravitreal antibiotics in trainees is low and the need for further training has been highlighted. A 5-minute instructional video outlining the skill of obtaining a vitreous sample using a vitrector substantially increased trainees' confidence levels.

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*DISCLOSURE:* No commercial relationship: Michael Grinton, Roxane Hillier