

Edwin Buckett  
Assistant Coroner  
Inner North London  
Poplar Coroner's Court  
127 Poplar High Street  
London E14 0AE

11 June 2021

Dear Mr Buckett

**Regulation 28 Prevention of Future Deaths (PFD) report:  
Gary Day (died 16 December 2020)**

I am writing in response to the PFD report that you issued on 13 April 2021, following your investigation into the death of Mr Gary Day from an air embolism. This followed a surgical procedure (endoresection of a choroidal melanoma) undertaken on 15 December 2020 at Moorfields Eye Hospital. We have completed our internal investigation and have shared the report with [REDACTED] next of kin, and her family.

Our investigation identified a number of opportunities for improvement and shared learning; implementation of the agreed actions will be closely monitored via our internal governance processes. We have also shared our completed investigation report with the Care Quality Commission and our lead commissioner and commissioning support unit.

Our internal investigation considered potential air sources as possible, or likely sources of air entry, based on precautions taken and/or the volume of air present. However, it was not possible to conclude exactly how air was able to enter the patient's circulatory system. It is confirmed, because of the existence of the recording of the procedure, that air did not enter the patient's circulation

visibly via the eye, as this would have been observed as a significant volume of air bubbles. However, only occasional small singular bubbles were seen either during surgery, or on subsequent review of a recording of the procedure.

There are four explanations for the subsequent development of air embolus that have not been excluded or considered in detail as a possibility during the course of this investigation. Further consideration of these possibilities is warranted, but this will be done as part of a larger piece of research that considers the worldwide prevalence of similar cases. The four possible causes of air embolus have been identified as:

- Heavy liquid;
- Heavy liquid interaction with another substance (e.g. silicone oil);
- Patient physical or medical conditions that makes a patient more or less disposed to the risk of air embolus; and
- A previously unrecognised source.

Following careful consideration of your concerns, in light of our investigation findings and consideration of information shared by endoresection surgeons from around the world, our responses are set out below:

### **Concern (a)**

*Any patient who elects to have an endoresection operation of a choroidal melanoma faces a risk (however small) of air embolism and therefore death. This must be made clear to all patients undergoing such a procedure.*

### **Trust response**

As we have been unable to establish the cause of the air embolus, the trust has elected to not undertake further procedures of this nature. We acknowledge your concern and if this procedure is performed at any time in the future we will ensure that patients are informed of the associated risk of death.

### **Concern (b)**

*There ought to be some check/investigation post operation to determine (or to try and determine as best possible) whether air may have entered the blood stream during the operative procedure.*

### **Trust response**

The trust does not have the facilities to undertake the enhanced level of monitoring that patients undergoing this procedure would require. As we have been unable to establish the cause of the air embolus, the trust has elected to not undertake further procedures of this nature. We acknowledge your concern

and if this procedure is performed at any time in the future we will ensure that it is undertaken in a facility that can provide the post-operative monitoring and intensive care support required.

### **Concern (c)**

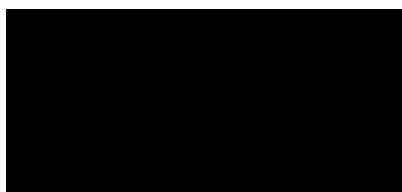
*Patients undergoing this operation (which normally lasts between 2-3 hours) should be advised to stay in hospital as an in-patient for at least 24 hours, which would enable careful and extended monitoring of their condition and a swift and informed transfer, if necessary, to an acute care unit of a hospital in the event of a deterioration in their condition.*

### **Trust response**

As described above, the trust does not have the facilities to undertake the enhanced level of monitoring that patient's undergoing this procedure would require. As we have been unable to establish the cause of the air embolus, the trust has elected to not undertake further procedures of this nature. We acknowledge your concern and if this procedure is performed at any time in the future we will ensure that it is undertaken in a facility that can provide the post-operative monitoring and intensive care support required.

I hope this response is satisfactory and we would be happy to answer any further queries.

Yours sincerely,



**Consultant vitreoretinal surgeon**

**Medical director**