



Gas in Eye Wristbands. Are they staying on?

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Purpose : Intraocular gas use in vitreoretinal surgery comes with associated risks and requires patient understanding of associated hazards to prevent iatrogenic blindness. Wristbands are provided by certain gas suppliers to alert other healthcare professionals in emergency situations. This project explored patient behaviour and understanding of gas in eye and its risks.

Setting

Quality improvement project at a large district general hospital

Methods

Retrospective case note review and telephone patient questionnaire conducted in two separate cycles, three months apart.

All consecutive patients >18 years of age who underwent a vitreoretinal procedure involving placement of gas in eye over a four-week period were included.

Patient asked over telephone within 2 weeks of their operation: Were they wearing a yellow wristband when they left the hospital after their operation? If yes, did they know the purpose of the wristband and how long they kept it on for.

Why?

- Certain scenarios in the post-operative period can cause increase in gas bubble volume— risk of eye pressure rise and subsequent central retinal artery occlusion. Therefore risk of irreversible blindness. ⁽¹⁻⁵⁾



- Need to reduce risk of vision loss and of patients receiving nitrous oxide following injection of intravitreal gas, even in emergency settings where a patient's consciousness may be impaired. ^{8,9}



Results

Response rate was 24/30(80%) and an initial rate of 50% (12/24) with patient 'wearing' gas wristbands was found (10/24(42%) of patients had a gas in eye wristband on upon discharge. 2/24 had wristband given to them). Our aim was 100% therefore:

Recommendations made included: providing a BEAVRS 'Gas in Eye' leaflet and designating a member of staff to be responsible for placing wristband on patient in recovery and patient education.

During the second cycle, response rate was 11/12(91.7%) and 91% had a gas in eye wristband on upon discharge. Approx 82% of patients knew this was for gas in eye but only 3/11 (27%) knew to keep the wristband on till all the gas had gone.

Conclusion

This study highlights that improving patient understanding regarding gas in their eye which goes beyond not flying is required. This includes patient understanding of the importance of a gas in eye wristbands to alert medical colleagues to reduce the risk of iatrogenic blindness.

Future work/ recommendations

Risk of iatrogenic irreversible blindness means an annual QIP cycle for this topic should be considered as part of the departmental meeting.

Patient engagement is paramount to influence safe post-op behaviour – any patient information provided regarding this topic should have a patient focus group consultation.

Some gases i.e from wall supply do not come with gas in eye wristbands. Ideally, a national generic wristband should be created to standardise the alert.