Control of Bleeding during Diabetic Vitrectomy

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Bleeding is the nightmare

- Neovascularization
- Anatomical B.Vs
  - Ostia at epicentres
  - Tearing of retina
  - Injury of major BVs
Diminish risk of bleeding

- Preoperative measures
  General medicine BP INR
  Avastin injection
  1.25 mg or 2.5 mg
  Timing of injection
  Expected effect B.V. Fibrous

- Possible benefit Decrease bleeding
  Do all surgeons inject preoperatively?
  60% do not (AAO questionnaire)
  Potential harm Doubtful value
Heavy Perfluoro-carbons Liquids

Immiscible with Blood

- Keeps it away from the posterior pole
- Delays clotting
- Limits clot to bleeding point
- Easier removal of blood
- Highlights structures (shape of globule)
Pressure on bleeding point

Role of infusion pressure
- Higher pressure = Lower Vascularity
No Hypotony

- ADJUST INFUSION PRESSURE WITH SUCTION/CUT WITH NO SUCTION
- FLUID/AIR EXCHANGE (SUCKING AIR)
- AT THE END

Removal of blood
KEEP SUBHYALOID BLOOD
Open canula

Diathermy

- Coagulation  Coaxial bipolar
- Tissue to be cut  or removed
- Bleeding points
  - Remember:
    - Friability
    - Shrinkage
  - Flat tip
  - Tapered tip
  - Not  retinopexy
  - Ischaemia
ILLUMINATED DIATHERMY

Control of bleeding summary

- Preoperative Anti VGF?
- Proper surgical technique
- Timely diathermy
- Use of PFC
- Infusion pressure
- Point pressure on the bleeding point
- No hypotony
- Air  Laser
- Use of silicone oil
IATROGENIC TEARS

How a tear is produced

- At the very beginning
- retina is mistaken for posterior hyaloid
- Start eating posterior hyaloid nasal midperiphery
- Traction on friable diabetic retina
- Centripetal
- Avoid creating
- Unavoidable?
  - Keep to end
- Remove traction
- Laser tamponade
IOP after Diabetic vitrectomy

check early

Early Causes
- Ghost cells
- Inflammatory debris
- Pupil block Gas Silicone
- Iridectomy block
- Overfill Aphakia
  Remove
- Silicone oil in Anterior Chamber

IOP after vitrectomy

Late causes
- Pre existing glaucoma
- Cortisone response
- Organisation at angle
- Neovascular Glaucoma
  Prevent Aggressive ablation
  Remove peripheral retina
  End up by full attachment
- Silicone oil in AC Emulsified
Management scheme

- Remove oil and medical
- Filtration procedure
- Penetrating SST
- Nonpenetrting
- Not an open eye surgery
- No iridectomy
- As effective

Antimitotic agents

- Angle surgery
- Ciliodestructive

Thank you