Brighton and Sussex University Hospitals NHS Trust

SOP for Pre-operative Assessment under General Anaesthetic /IV sedation at Sussex Eye Hospital

Purpose	To outline the pathway and management of patients undergoing Ophthalmic pre-operative assessment under general anaesthetic
Objectives	• To ensure all staff work together to ensure accurate assessment, documentation and preparation of the patient prior to surgery • To improve patient safety and hospital experience • Reduce cancellations on the day of surgery and prepare patients for discharge • Improve throughput of patients on the day of surgery • Improve bed planning
For Use By	All healthcare professionals working in pre-assessment to guide their practice provided that : • The staff member is deemed competent to undertake pre-operative assessment by their line manager • The staff member has the prerequisite skills and relevant professional development to undertake the role in pre-operative assessment

Guidance for Pre-operative Investigations

Full Blood Count (FBC)	• Patients over 60 • Patients with the following conditions regardless of age: ➢ Anaemia ➢ Cardiovascular disease ➢ Hypertension ➢ Respiratory disease ➢ Renal impairment ➢ Suspected/known liver disease ➢ Haematological condition ➢ Chronic disease, eg. Rheumatoid, Crohn's
Urea and Electrolytes (U&Es)	• Patients over 60 • Patients with the following conditions regardless of age: ➢ Renal disease ➢ Suspected/known liver disease ➢ Cardiovascular disease ➢ Hypertension ➢ Diabetes ➢ Cardiac pacemaker/ICD ➢ Malignancy ➢ Dehydration from vomiting and or diarrhoea • Patients on the following medications: ➢ Diuretics ➢ Anti-hypertensives ➢ Heart rate control medication ➢ Digoxin ➢ Steroids ➢ Lithium ➢ Anticonvulsants ➢ Disease modifying agents: methotrexate, sulfasalazine, hydroxychloroquine, azathioprine, cyclosporine, infliximab, rituximab, cetuximab etc (also check FBC)
Coagulation studies	• All patients on Warfarin • Patients on Dabigatran, Rivaroxaban • Patients with the following conditions: ➢ Suspected/known liver disease ➢ Renal impairment ➢ Advanced malignancy ➢ Known haematological problem ➢ History of abnormal bleeding tendency ➢ Previously Platelets below 100
Group and Save	• Not routinely- only if requested by Surgeon or Anaesthetist
Liver Function Tests (LFTs)	• All patients with known or suspected liver disease: ➢ Liver cirrhosis ➢ Inflammatory bowel disease (Crohn's, Ulcerative colitis) ➢ Excess alcohol intake ➢ Advanced malignancy In addition, Coagulation studies should also be performed for

	patients with the above
Haemoglobinopathy – Sickle Cell Screen	• Patients of the following origin: ➢ Afro Caribbean ➢ Afro American ➢ Central African
Random Glucose & HBA1C	• History of Diabetes • Medication including steroids if random BS >11 mmol/l • BMI >35 and random BS >11 mmol/l
Thyroid function test (TFT)	• History of altered thyroid function • History of thyroidectomy
Pro BNP (blood test)	• Suspected or poorly controlled heart failure
ECG	• Patients over the age of 60 • All patients with any cardiac history Specific indications include: • History of hypertension • History of myocardial infarction • History of valvular heart disease • History of Atrial Fibrillation • History of angina or breathlessness or palpitations • Other known or suspected cardiac disease • Congenital heart disease • Diabetes or hyperlipidaemia and age over 40 • Renal disease
Chest x-ray	Not routinely unless requested by the surgeon or Anaesthetist
Pregnancy test	• All women of child bearing age on day of surgery except: ➢ Women who have had a hysterectomy ➢ Women known to be pregnant
Pacemaker Check	• Patients with an implanted pacemaker need a pre-op check within the last 6 months • If in doubt contact the Pacing Team on Ext 4090
Internal Cardiac Defibrillators (ICDs)	If the patient has an Internal Cardiac Defibrillator (ICD) an e-mail should be sent to the pacemaker clinic asking the following questions: 1) Is the device sensitive to Bipolar Diathermy? 2) Do you recommend turning this device off if using Bipolar Diathermy? 3) If so will you need to be present to test this device post-surgery? 4) Is there anything unusual about this device? 5) Are you aware of any problems or issues we need to know about that have occurred with this patient? 6) Do they need an appointment with cardiology following our

	surgical intervention? An e-mail should be sent to theatre and the Anaesthetist with the patients details and the answers to the above questions
Peak Flow Expiratory Flow Rate (PEFR)	All patients with asthma or COPD should have 3 PEFR measured
BMI	Document weight, height and BMI for all patients
STOP BANG (Appendix 1)	All patients with BMI > 35 Kg/m^2
Axial length	All patients with Glaucoma
Functional Capacity (METS) (Appendix 2)	Ask all patients to complete the Functional Capacity questionnaire whilst they are waiting. Calculate functional capacity in METS (metabolic equivalents)

5.2 Criteria for Referral to Anaesthetic Review Clinic (ARC) or Notes Review

Referral may come directly from Doctors or Pre-operative assessment staff. Some patients may only require notes review and others will require formal clinic assessment. The following list is not exhaustive and other groups of patients may still benefit from specialist review.

Surgical procedure	• OOKP • Bilateral Cataracts
Specific Anaesthetic Issues	• History of anaesthetic related complications including: ➢ Awareness ➢ Unexpected ICU admission following surgery ➢ Life threatening intra operative events ➢ Malignant hyperthermia ➢ Anaphylaxis ➢ Porphyria (refers to a group of disorders that result from a build-up of natural chemicals that produce porphyrin) • Airway Issues including: ➢ Anticipated difficult ventilation or intubation ➢ Reduced mouth opening (<3 fingers breadth) ➢ Head and neck tumours ➢ Cervical disease including previous surgery ➢ Patients with severe arthritis of the cervical spine significantly reducing neck movement ➢ Morbid obesity (BMI >40, or >35 with other co-morbidities) ➢ Tracheostomy patients
Respiratory Disease	• COPD/COAD with ➢ breathlessness at rest ➢ inability to climb one flight of stairs ➢ wheeze most of the time

	• Recent admission to hospital with exacerbation of respiratory symptoms • Diagnosis of sleep apnoea • Patients on home oxygen • Patients with hypoxia (Spo2 <93%) • PEFR<200 l/min • Asthma poorly controlled that restricts daily activities • History of asbestosis • History of cystic fibrosis • Other systemic disease with respiratory symptoms e.g. heart failure, rheumatoid disease etc.
Cardiovascular Disease	• Symptoms of poorly controlled heart failure (should be seen by cardiology first) • Unstable coronary artery disease (should be seen by cardiology first) • MI <6/12 and urgent procedure • Patients who have undergone coronary revascularisation (PCI, stenting, CABG) <6/12 and urgent procedure • Patients with valvular heart disease and functional limitation should have a notes review • Patients with undiagnosed heart murmur • Patients in AF with a heart rate of >100 • Patients with complete heart block, trifascicular block or Mobitz type 2 block on ECG • Patients with documented pulmonary hypertension
Renal Disease	• All patients requiring dialysis • All patients with worsening renal function and eGFR <50ml/min • Patients with significant electrolyte disturbances: ➢ Sodium < 128 mmol/L ➢ Potassium > 6.0 mmol/L ➢ Calcium > 3.0 mmol/L
Endocrine Disease	• Diabetes: ➢ For non-urgent procedures concerns regarding IDDM should be referred to the Community Diabetes Nurse. For peri-operative problems the patient should be referred to Trust Guidelines with in-patient Diabetic Team ➢ For non-urgent procedures patients with HBA1C > 69 mmol/L or BS > 12 mmol/L should be referred back to GP or Diabetic Nurse Specialist. Patients for urgent surgery should be discussed with the Anaesthetist • Thyroid Dysfunction ➢ Abnormal thyroid function should be discussed with the Anaesthetist • Patients with multiple endocrine neoplasia (MENS), Acromegaly, Cushing's should be seen in clinic

Obesity (Appendix 1)	• All patients with BMI>40 • Patients with BMI>35 and other comorbidities • Patient with STOP BANG score of >5/8 *Please refer to the Obesity guideline*
Haematological problems	• Patients with known or suspected bleeding disorders: ➢ Von Willebrands ➢ Haemophilia ➢ Idiopathic Thrombotic Purpura
Neurological Disease	• Patients with capacity issues e.g. dementia, Alzheimer's, learning disabilities • Stroke, TIA <6/12 and urgent procedure • Patients with significant intracranial problems including AV malformations, Cerebral aneurysm & brain tumours • Unstable epilepsy (should be seen by neurology first) • History of myasthenia gravis • History of muscular dystrophy • History of multiple sclerosis • History of spinal cord injury • Severely debilitated wheel-chair bound patients
Functional capacity (Appendix 2)	All patients with METS<4 should be referred to the anaesthetic review clinic

Appendix 1 - STOP-BANG Questionnaire

For all patients with BMI>35

Patient Addressograph

Date: _____

Please tick for YES or NO

YES	NO	
		SNORING
		Do you **snore loudly** (loud enough to be heard through closed doors or your bed partner elbows you for snoring at night)?
		TIRED
		Do you often feel **tired, fatigued or sleepy** during the daytime (such as falling asleep driving)?
		OBSERVED
		Has anyone **observed** you **stop breathing** or **choking/gasping** during your sleep?
		PRESSURE
		Do you have or are you being treated for **high blood pressure**?
		BODY MASS INDEX (BMI)
		Is your **Body Mass Index** more than **35**?
		AGE
		Are you older than **50** years old?
		NECK SIZE (Measured around Adams Apple)
		For male – is your shirt collar more than **17** inches/ **43 cm** or larger? For female - is your shirt collar more than **16** inches/ **41 cm** or larger?
		GENDER
		Male?

Yes ticks >5/8 – refer to ARC

Consideration to refer to ARC should also be given when:

- Waist circumference is greater than 104 cm
- Collar size is greater than
  - Male – 43 cm
  - Female – 41cm

Appendix 2 – Functional capacity

To be used by Pre-assessment nurses

For patients who have capacity only

Patient Addressograph

Date: _____

Please circle YES or NO to the following questions

Can you:	Circle	
1. Take care of yourself? Eat, dress, or use the toilet?	YES NO	1 MET ↓
2. Walk indoors around the house?	YES NO	
3. Walk 100 m or yards on level ground?	YES NO	
4. Climb a flight of stairs or walk up a hill without stopping?	YES NO	4 METS ↓
5. Do heavy work around the house like scrubbing floors, or lifting or moving heavy furniture?	YES NO	
6. Participate in strenuous sports like swimming, tennis, football, basketball or skiing?	YES NO	>10 METS

Please refer to ARC if <4 METS

Appendix 3 - THE DUKE ACTIVITY STATUS INDEX

To be used by Anaesthetists only

Patient Addressograph

Date: _____

Please circle YES or NO to the following questions

Can you:	Circle	Weight
7. Take care of yourself, that is, eat, dress, bath, or use the toilet?	YES NO	2.75
8. Walk indoors, such as around the house?	YES NO	1.75
9. Walk a block or 2 on level ground?	YES NO	2.75
10. Climb a flight of stairs or walk up a hill without stopping?	YES NO	5.50
11. Run a short distance?	YES NO	8.00
12. Do light work around the house like dusting or washing dishes?	YES NO	2.70
13. Do moderate work around the house like vacuuming, sweeping floors or carrying in the groceries?	YES NO	3.50
14. Do heavy work around the house like scrubbing floors, or lifting or moving heavy furniture?	YES NO	8.00
15. Do yard work like raking leaves, weeding or pushing a power mower?	YES NO	4.50
16. Have sexual relations?	YES NO	5.25
17. Participate in moderate recreational activities like golf, bowling, dancing, doubles tennis, baseball or football?	YES NO	6.00
12. Participate in strenuous sports like swimming, singles tennis, football, basketball or skiing?	YES NO	7.50

Duke Activity Status Index (DASI) = sum of weights of YES replies = ☐

Functional Capacity in METS = 0.43 x DASI + 9.6 then divide by 3.5 = ☐

Appendix 4 - List of medical conditions and waiting time before referral to ARC, if procedure not urgent

CONDITION	REFER AFTER
MI, stent, CABG	6 months
STROKE, TIA	6 months
PATIENTS AWAITING OTHER SPECIALIST REVIEW, e.g. cardiac, respiratory, neurology etc	AFTER OTHER SPECIALTY REVIEW
PATIENT AWAITING ECHO, LUNG FUNCTION TESTS, CT, MRI, or other tests requested by cardiology, respiratory medicine or neurology	AFTER TESTS DONE
DVT, PE	3 months
CHEST INFECTION	3 weeks

If patients with above require urgent operation then please discuss with anaesthetist.

Appendix 5 Anti-hypertensive medication pre-op guidance

Stop all Angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin-receptor blockers (ARBs) **on the morning of surgery – for General Anaesthesia ONLY**

ACEIs: usually ending in '**pril**' (e.g. Ramipril, Lisinopril, Captopril, Enalapril, Perindopril etc)

ARBs: usually ending in '**sartan**' (e.g. Losartan, Ibesartan, Candesartan etc)

All other anti-hypertensive medications can be taken as normal on the day of surgery.

Patients with heart failure may benefit from not stopping ACEIs and ARBs; these patients should be referred to ARC anyway and the Anaesthetist will decide whether or not to stop them on the day of surgery balancing risks and benefits.

References

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