Preoperative Investigations

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Problems of Pre-op Investigations

- Cost of investigations
- Time/ Delays
- Stretches other resources eg. labs
- Unlikely to change management
- Who looks at results?
- False positives
- Liability
Our audit

- Objective = To demonstrate rationale and consistency in our preoperative investigations.
NICE Guidelines

Published June 2003

Originally to be reviewed 2007 and updated 2009

Now to be reviewed ±updated June 2010

“Recommendations to help guide the appropriate use of routine preoperative tests before elective surgery”

Children and adults

Aimed at Secondary care
### ASA Grade 1: adults ≥ 16 years

<table>
<thead>
<tr>
<th>Test</th>
<th>Age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;16 years</td>
</tr>
<tr>
<td>Chest X-ray</td>
<td>No</td>
</tr>
<tr>
<td>ECG</td>
<td>No</td>
</tr>
<tr>
<td>Full blood count</td>
<td>No</td>
</tr>
<tr>
<td>Haemostasis</td>
<td>No</td>
</tr>
<tr>
<td>Renal function</td>
<td>No</td>
</tr>
<tr>
<td>Random glucose</td>
<td>No</td>
</tr>
<tr>
<td>Urine analysis*</td>
<td>No</td>
</tr>
</tbody>
</table>

* Dipstick urine testing in asymptomatic individuals is not recommended (UK National Screening Committee)
But...

- Based on level 4 evidence
- Use patient’s ASA grade
- Use grade of surgical procedure
- “Simple” format is 32 tables
- Vague
Methods

- 12 days randomly selected
- Feb-April 2009
- Patients’ notes reviewed
- Exclusions: Emergency/ Day case/ Maternity
- ASA as noted by anaesthetist
- Labs/ Radiology system checked
- Data of patient/procedure/tests
Results: Demographics
Results: Demographics
Patient Age
Age by Specialty
Results: ASA

Number of Patients by ASA (exc children)

- ASA 1: 42
- ASA 2: 50
- ASA 3: 8

(Chart shows the distribution of patients by ASA status, excluding children.)
ASA: comorbidity

1. Hypertension
2. Smoker (ASA 1 or 2…)
3. Asthma/ COPD
4. Hypothyroidism
5. Ischaemic heart disease
NICE Guidelines

% Patients Compliant to NICE

- Compliant: 72%
- Not compliant: 28%
NICE Guidelines

Without children!
NICE Guidelines
By specialty: ENT
ENT

- Many children; Average age 27.7 years
- Lower ASA grade
- Fewer tests
- However, highest proportion of recommended tests not performed
- Patients clerked by SHO-level between other duties
By specialty: General
General Surgery

- Older patients
- Higher ASA
- Few recommended tests not performed
- High number of unnecessary tests performed (esp. coag screen)
- Staffed by FY1s following tradition
- Possible variation between consultants
By specialty: Gynae
Gynaecology

- Average age 49.2 years
- Mostly appropriate (following NICE)
- Trend of FBP and Blood group
- Staffed by SHO-level dedicated to ward
Overall Trends

- Few CXRs performed: reassuring
- ECG was most common test recommended but not performed
- Trends by specialty may relate to staff clerking patients
- Many tests “to be considered” as per NICE: were given benefit of doubt
Other tests

- Lung function tests
- ABG
- Urinalysis
- Sickle cell test
- Pregnancy test

Does not include blood product matching
Issues

- Who performs/ requests investigations?
- What guidance is followed?
- Is NICE guidance an appropriate standard?
- Will a pre-assessment clinic rationalise and standardise our investigations?
Summary

- No clear guidance followed
- Trends in investigations depending on specialty of patient
- Trends may relate to staff clerking patients
- Introduction of pre-assessment clinic may standardise investigations
References

