

Snapshot Survey Results

Out-of-Hours Intervention for Haemorrhage

Summary of findings

There is a significant OOH intervention for haemorrhage workload, amounting to about 2000 cases per year annually in the UK.

Most cases are performed in teaching hospitals and in the evening (before midnight) and during the weekend daytime.

Very few cases are referred via a network.

Referrals come from senior clinicians with good support in the angiography suite from other specialties (though with anecdotal evidence that this sometimes requires negotiation to achieve). Most cases had at least a scrub nurse and radiographer in attendance.

Delays in transfer of patients to the angiography suite remain a major problem.

The cohort of patients requiring intervention OOH for haemorrhage control are unwell, though immediate technical results are good.

Workload

During the one week of the survey, 37 interventions were performed, equating to an annual workload of 2000 cases. There was a fairly even distribution nationally.

30 (80%) cases were performed at teaching hospitals,

though these represent only about 13% of NHS acute trusts. This finding cannot be explained by networking as only 5 (17%) patients were referred from an outside hospital. This raises the question whether patients in non-teaching hospitals are not being offered intervention OOH for haemorrhage. There were free text comments supporting this supposition, e.g. “[untreated] post liver biopsy bleeder with no IR on call overnight but IR during the day”.

Case ascertainment

It is difficult to establish the rate of case capture in a survey. 2015 data from NVR indicate 164 EVARs done OOH for ruptured AAA, or about 3 a week. The survey captured one. A rough calculation based on workload from the British Society of Gastroenterology (BSG) upper GI bleeding audit and the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) GI bleeding study suggests 8 GI bleeding cases require OOH IR in a week. The survey captured nine. Overall



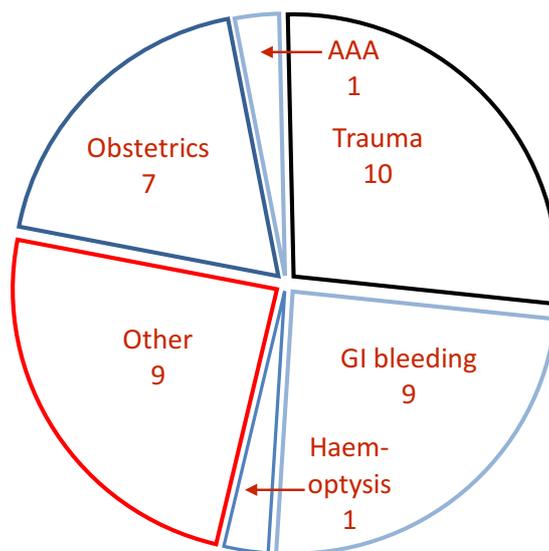
case ascertainment therefore seems good, though a more definitive estimate of total workload is impossible to conclusively establish. Capture may be better for some procedures than others.

Indication and referral source

There was a diverse range of indications, as indicated in the pie chart. The 'other' group included a mycotic aneurysm, spontaneous splenic bleeding, rectus sheath haematoma and iatrogenic causes. The majority (21) of cases were referred by a consultant colleague or by an SpR with subsequent consultant input (4). No cases were referred from more junior grades.

Of 5 patients referred for intervention from an outside institution, 3 were referred where no formal networking arrangement existed.

Of 37 patients, 2 were in shock and 12 were haemodynamically unstable on arrival in the angiography suite. All these patients had anaesthetic support on arrival and 8 were anaesthetised. 6 of the other 23 stable or normal patients were anaesthetised.

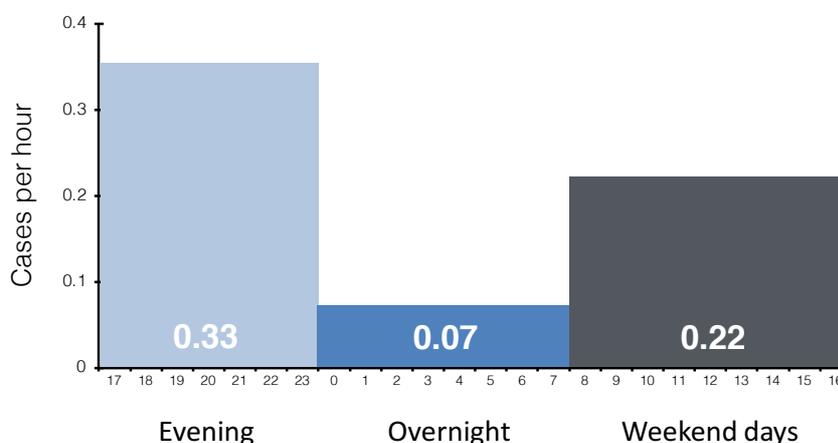


Timing

Most cases were performed in the evening or during the day at weekends. Substantially fewer cases were undertaken starting after midnight.

The cases were not simple, with a mean duration of 100 minutes (range: 30 - 360 minutes).

Delays in transferring the patient to the angio suite was a common theme with almost one-third of cases being delayed due to organisational or systemic issues. This observation was

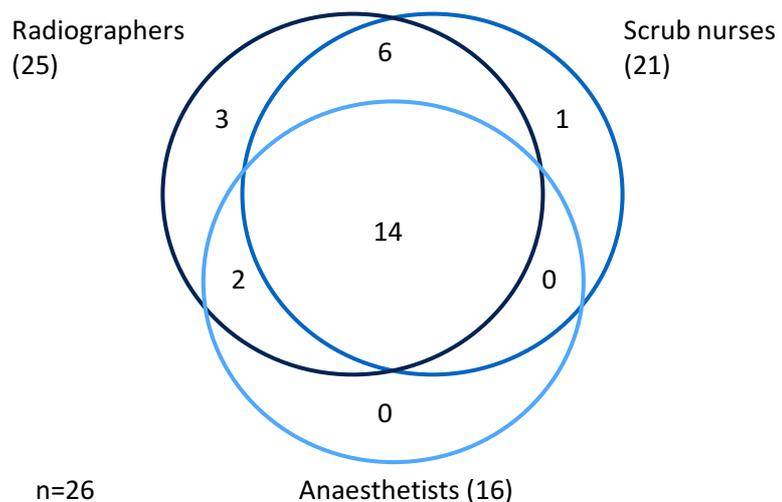


reflected in free text comments such as "Patient with GI bleed at local large DGH was referred at 5pm. Due to transfer delays didn't arrive until 3am next day" and "Institutional lethargy on this particular site".

Staffing

Most respondents were documented as being on call for the interventions undertaken. The staffing support in the angiography suite was considered safe by the operator in 25 of 26 cases where this question was answered.

The standards for staffing are defined in the RCR / BSIR documents "Provision of Interventional Radiology Services" and "Standards for Providing a 24hr IR Service". They state a "...minimum requirement for patient safety is... [a] scrubbed assistant and sedation and monitoring provided by a separate member of staff" and that OOH IR services are "...formally supported by an on-call rota for a named... consultant radiologist, radiographer, interventional radiology nurse, anaesthetist when appropriate"



Twenty-five of 26 cases had a radiographer and 21 of 26 cases had a scrub nurse in attendance. While the results are encouraging, the standards laid out in the RCR / BSIR documents have not been achieved.

As previously mentioned, anaesthetic support was frequently available, especially for the most unstable patients. Additional support from consultant surgical (6) or IR (5) colleagues and junior doctors (9) was frequently documented as present in the suite at the time of the intervention. These encouraging statistics are not mirrored in free text comments such as "often frustrated that we see the sickest patients in the hospital, but get the least support OOH". It may be that in some cases, while the support is there at the time of the intervention, there is a degree of negotiation beforehand to access it.

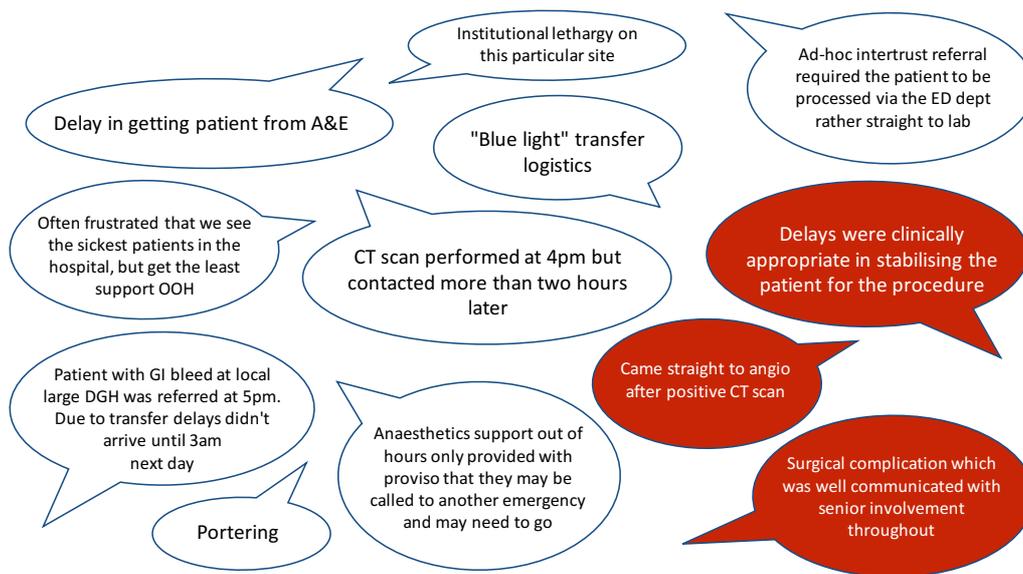
Outcomes

Technical success (haemorrhage controlled angiographically) was achieved in 30 of 37 patients, and possibly achieved in another 3 patients. Four patients had no intervention performed. In unstable

patients technical success was achieved in 12 of 14. The rates of data return were very poor for 30 day mortality data (4 returns).

Free text comments

Free text comments generally described frustration with the logistics of getting patients treated OOH including issues with communication, patient transfer and OOH support from other disciplines. Encouragingly, there were also a number of comments where things had gone well



Summary

There is a substantial workload of OOH IR for haemorrhage control. This is mostly performed in teaching hospitals. There were very few networked referrals.

Most work is in the evening or during the weekend daytime. Most referrals involve senior clinical input.

The patients needing OOH IR for haemorrhage control are sick, though with there are good immediate technical results.

By and large, support for IR consultants in the angiography suite is good, especially for the most unstable patients. However, anecdotal comments suggest that this support sometimes is problematic to access.

Patient transfer and OOH logistics remain an issue.

Dr Christopher Hammond

for the BSIR registries and audit committee, December 2016