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**Audit**

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| **Audit Title:** Regional Re Audit Of CSF Spectrophotometry For Bilirubin In Suspected SAH |
| **Lead Auditor: Ellie Duly** | **Audit date(s): 2016-2017** |
| Please indicate if **Local /** Regional **/ National Audit**Please indicate which hospital & location or region**Northern Ireland** | **Report Author:**Name: Ellie DulyEmail:ellie.duly@setrust.hscni.net |
| **Aims of the Audit:** Based on recommendations of initial audit of CSF Spectrophotometry For Bilirubin In Suspected SAH( 2011 ) .The reaudit wished to assess current service provision and develop guidance on further improvements which might be made |
| **Audit Method and Outcome(s):**1. The re audit was based on the standards in

Cruickshank A et al. Ann Clin Biochem 2008; 45:238-244.1. A questionnaire devised by the regional audit group was sent out to the clinical biochemists or chemical pathologist in each of the 5 Trusts in NI
2. Results were collected and compiled by Ellie Duly in SETrust
3. Findings and recommendations produced
4. There is considerable variation in numbers requested in individual trusts. The reason for this variation is unclear. It was not possible to find which of these scans were appropriate
5. % scans consistent with SAH ranges from 0.9– 3.2% (mean 2%)
6. Truly positive (proven by cerebral angiography): 7 plus possibly 1 more (0.3%)
7. Prior CT scan of brain before CSF collection not always stated- but appears to have been done in most cases
8. Positive SAH on CSF spectrophotometry did not fit clinical presentation 16- meningitis, viral encephalitis, metastases, sinusitis- see new guidelines.
9. All Trusts use scanner with interpretive software and glass micro cuvettes
10. 4 trusts use ADP IQC-stored frozen- with each batch or sample
11. 2 Trusts offer 24:7 service, 2 Trusts have some minor restrictions but 24:7 service is available by authorisation of on-call Consultant, 1 trust does not do OOH
12. In 5 Trusts, BMS reports all negative scans directly to ward. –by phone and/ or LIMS
13. Positive results reported by Consultant in all 5 Trusts
14. Occasions where interpretation of SAH was difficult: dirty cells (negative baseline), turbid samples, anaesthetic drugs
15. Standard interpretive comments provided on LIMS.
16. All trusts state requirements for sampling, transport and interpretation
17. All labs attempt to get the 4th sample for CSF.
18. Required volumes are communicated to junior medical staff
19. All Trusts insist on sample protected from light before it reaches the lab. If not a comment is added – result unreliable.
20. All Trusts recognise that pneumatic tube systems are best avoided in transporting samples to lab.
21. All Trusts insist that simultaneous blood samples are taken for serum bilirubin/total protein. An appropriate timed serum sample is usually in the lab anyway if sample not taken
22. Average time from sample taken to analysis is 1h- 19h-depends on outlying hospitals
23. All labs always ask about timing of the CSF sample relative to that of possible haemorrhage. All recognise that this should be no less than 12 hours. However- This information is rarely available to the lab
24. Samples are never diluted
25. Samples are centrifuged ASAP after receipt but this may be > 2h after collection
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| **Audit Recommendations / Standards:****Recommendations**1. Current practice on provision of CSF sampling requirements to wards, sample transport, handling, processing and reporting of results works well and should be continued. The equipment and software used throughout the region works successfully.
2. New CSF guidelines reflect the finding that the majority of positive SAH scans were due to non SAH causes such as meningitis, viral encephalitis, metastases, and sinusitis. This should be borne in mind when discussing results with clinical colleagues
3. All Trusts should use the available IQC material
4. Trusts should be aware of interferences which can affect the appearance of the scan and hence interpretation of the scan by the software.
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| **Please indicate to whom and when audit presented &/or circulated &/or published:**30 /11/2018 presented to NI Regional Audit Group |
| **Audit recommendations / standards ratified by … and when:**Northern Ireland Regional audit group |
| **Date of audit report:**29/11/2018 |
| **Audit documents for upload to http://www.acb.org.uk/whatwedo/science/audit.aspx***Please include as attachments with this Audit Summary form if authors and the organising committee would like information to be publicly accessible on the ACB website Audit section.*PresentationStandards/RecommendationsBlankSurvey Questionnaire  |

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