Prolonged jaundice clinic: are we doing too many tests?

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Introduction

Prolonged jaundice is common and in most cases is benign and self-resolves. The prolonged jaundice screen aims to rule out serious causes of prolonged jaundice such as biliary atresia.

In our prolonged jaundice clinic our first line investigations are FBC, blood film, G6PD, TFTs, LFTs, split bilirubin and urine MC&S. Babies are often being brought back for repeat tests due to insufficient bloods or incidental findings. The process is time consuming, resource consuming and anecdotally resulted in poor patient satisfaction.

Aim

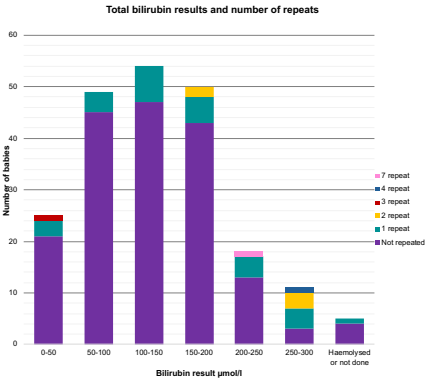
To reduce the number of investigations and potentially unnecessary repeat tests being carried out in the prolonged jaundice clinic

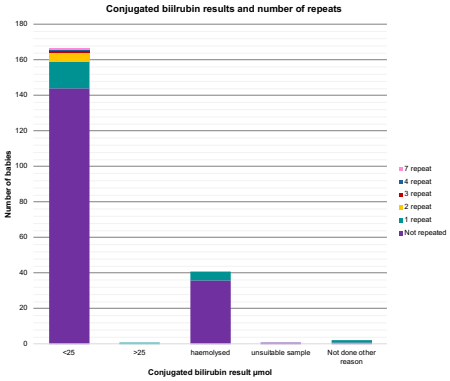
Methods

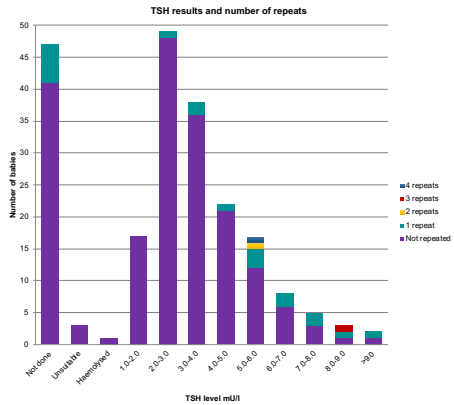
A retrospective review was conducted of babies seen in the prolonged jaundice clinic over 13 months between August 2016 and September 2017. We collected data on investigation results, repeat tests (and reasons for these) and what pathologies were ultimately picked up. This information was used to produce a new guideline with fewer tests.

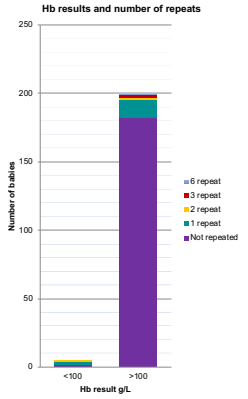
Results

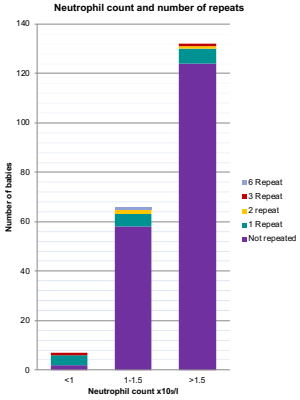
The figures below show a summary of the range of blood results of the babies included. Within each results bracket the number of babies that had a repeat blood test (and the number of repeat tests for that baby) is shown.

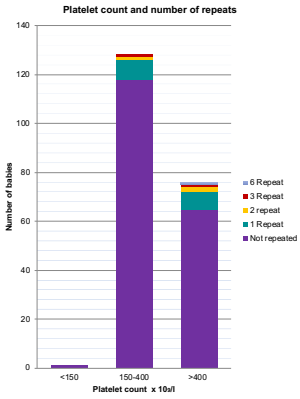












Key Findings

- 212 babies seen
  - Age at presentation to the PJC ranged from 13 to 64 days old (median 25 days)
- Only 14% had a bilirubin >200mmol/L
- Despite this, 32% babies had at least one repeat test carried out
  - Some had up to 7 repeat blood tests
- Total of 156 repeat tests were carried out
  - Reason for repeat tests were often not clear
- Pathology identified in 2.8%
  - 1 Autoimmune neutropenia
  - 3 G6PD deficiency
  - 1 intrahepatic jaundice
  - 1 E-coli UTI treated with oral antibiotics

Conclusion

There was a wide variation in how results were interpreted and reasons for repeating/not repeating tests. A large number of babies did not have high bilirubin results but were having repeat tests done for either insufficient bloods or incidental findings in other parts of the screen.

Plan

We have written a new guideline and proposed a 2 tier investigation pathway with all babies having 'tier 1' investigations (FBC and split bilirubin) when initially seen in PJC, but only those with abnormalities in this initial screen going on to have 'tier 2' investigations (repeat tier 1 investigations in addition to reticulocytes, film, group and DAT, LFTs and urine MC&S). We plan to re-audit results.

References

Jaundice in newborn babies under 28 days old, NICE guideline 2010
Children's Liver Disease Foundation Yellow Alert Jaundice Protocol: Early identification and referral of liver disease in infants 2015
Gilmour, S. 2004. Prolonged neonatal jaundice: When to worry and what to do. Gilmour, S. *Pediatric Child Health*.