An Audit Of Proactive Therapeutic Drug Monitoring Of Patients With Inflammatory Bowel Disease On Biologics

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Background

- Based on the European Crohn's and Colitis Organisation (ECCO) guidelines, biologics can be utilised to manage inflammatory bowel disease (IBD).
- Therapeutic drug monitoring (TDM) is the clinical practice of measuring serum drug concentrations to guide clinical decision-making.
- Use of TDM offers a more personalised treatment approach and is associated with sustained clinical remission.
- Data regarding practice of reactive (where asymptomatic patients are not tested) compared to proactive (all patients are tested and monitored) monitoring, is uncertain.
- Mercy University Hospital (MUH), Cork, Ireland, started proactive TDM in 2014 for all patients on biologics.

Aim and Objectives

To audit the clinical practice of TDM in patients on biologics and to determine that the appropriate drug dose is administered to ensure therapeutic level is achieved.

To determine if ECCO guidelines for TDM of biologics is adhered to.

To determine the outcomes of patients post-induction, post-escalation by measuring drug levels.

To determine the clinical decision made for patients with subtherapeutic levels post-dose escalation.

Methods

- A retrospective clinical audit was performed in MUH.
- Study population included 100 adults receiving Infliximab or Vedolizumab intravenous infusions.
- Data was collected through medical charts using a data collection proforma.
- Patients were categorised into Crohn's disease, ulcerative colitis and unclassified IBD, further sub-categorised into "on Infliximab" and "on Vedolizumab" and grouped based on outcomes post-induction and post-dose escalation.

References

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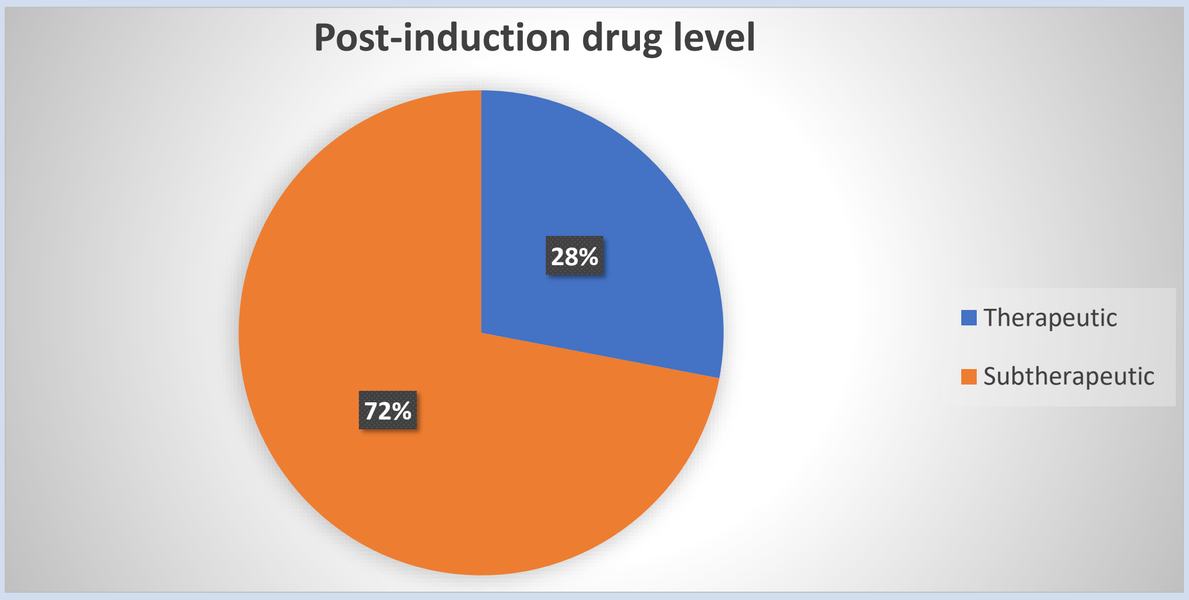
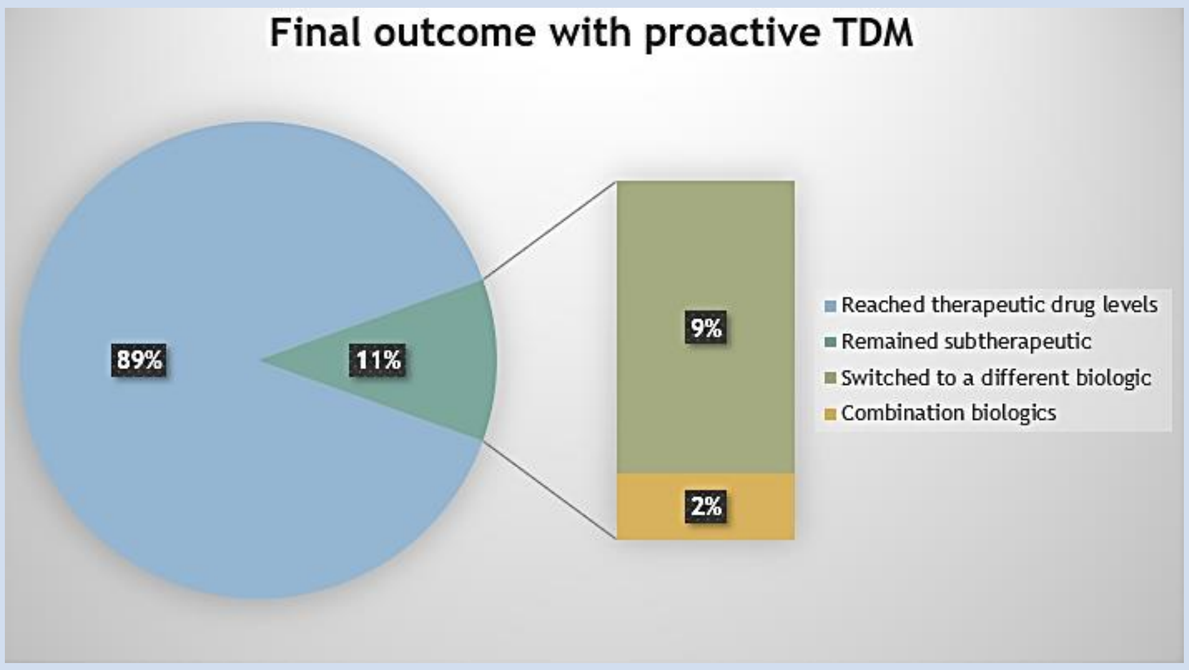
Results (post-induction)

- Post-induction levels were often subtherapeutic, with 72% of patients needing dose escalation.



Results (post-dose escalations)

- With dose escalation protocol based on proactive TDM, 89% achieved therapeutic levels with improved clinical outcome.
- For remaining 11% of patients whose drug levels remained subtherapeutic, they either switched to a different biologic (9%) or are managed with a combination of biologics (2%).
- There was a trend where patients with Crohn's disease on Infliximab requiring higher doses to reach therapeutic levels.



Conclusion

- This demonstrated the significant number of people who required dose escalation which would not occur without proactive monitoring.
- This audit highlighted the effectiveness of practising proactive TDM in helping patients reach therapeutic levels.
- Further studies will be needed to correlate with clinical effectiveness.