Can you just write me up a bag of fluids?

Andrew Kermode, Harriet Cunningham, Shuaib Quraishi, Natalie Powell

Department of Acute Medicine, Surrey & Sussex Healthcare NHS Trust

Aim
Safe prescribing including IV fluids is a key feature of the Foundation curriculum; yet anecdotally we felt that juniors may not be treating fluids as they would another prescribed medication.

NICE introduced a clinical guideline; IV Fluid therapy in adults in hospital2

These made the following recommendations;
• All patients should have an IV fluid management plan; containing:
  • Assessment of fluid requirements
  • Fluid & Electrolyte prescription for the next 24 hours
  • Monitoring plan for IV fluids
• Regular IV fluids require assessment of:
  • Clinical fluid status
  • Laboratory values
  • Fluid balance charts
  • Weight measurement

Results
Audit
The majority of IV fluid prescriptions met guidelines standards of including the type, rate and method of IV fluid administration

However, there was poor reassessment of fluid status (51%) once fluids prescribed, and incorrect volumes used for fluid bolus administration in resuscitation (13% correct).

Maintenance fluids were poorly prescribed – only 10% met guideline requirements. 34% had correct electrolytes and 25% had correct glucose requirements.

Discussion
The audit suggests that fluid prescribing is poor and our survey suggests a gap in training of junior doctors and opportunity for intervention.

As a result we have drafted a hands on guide for new FY1 doctors as well as a dedicated teaching session. We would encourage all hospitals to include such training early in an FY1 teaching programme.

This has been implemented across SaSH this year. A dedicated IV Fluid teaching session for FY1 Students was created, as a result of this assessment.

IV Fluid Teaching Session
Following teaching, both FY1 knowledge and confidence in prescribing fluids had improved. This was measured on a scale of 1-5, where 1 was No Confidence, and 5 Very Confident.

Assessing Fluid Status: FY1s had an average confidence of 3.38 ± 0.0071(CI) in their assessment of fluid status prior to teaching. Following teaching this increased to 3.71 ± 0.0069(CI).

Fluids in Resuscitation: Prior to teaching, confidence in this type of prescription was 2.944 ± 0.0107(CI), which increased to 3.78 ± 0.0062(CI).

Methods
Audit
Medical notes and prescription charts for 100 in-patients were audited against the identified NICE guideline.

Survey
31 junior doctors (12 FY1 Doctors, 3 FY2, 9 CMT/equivalent and 2 StR) about their knowledge of and confidence in (rated from 1 to 5) prescribing IV fluids and assessing fluid status.

Assessment
Juniors were also asked to identify which fluids (by pictures) should be used in different clinical scenarios (e.g. resuscitation).

Next Steps
Our aim is to continue the teaching of junior doctors in appropriate IV Fluid prescription.

To do this we plan to:
1. Continue teaching sessions for each FY1 cohort starting at SaSH.
2. Reassess IV fluid management by re-auditing SaSH prescriptions
3. Provide ward based posters & information to aid prescriptions