The University Of Sheffield.

School Of Health And Related Research.

NIHR Health Technology Assessment programme funded project

Issues in Systematic Review of Orphan Drugs: A Case Study of Eculizumab for AHUS

John Rathbone, Eva Kaltenthaler, Paul Tappenden, Alice Bessey, Anna Cantrell
Health Economics and Decision Science, ScHARR, University of Sheffield, UK.

@scharrheds

Rare Diseases eg. Atypical haemolytic uraemic syndrome (aHUS)

Outcomes often poor eg. End stage renal failure or death

Evidence base not well developed

What's the efficacy and safety of the treatment?

Electronic Searches

- 13 databases
- MEDLINE, Embase, The Cochrane Library
- Eligible studies independently reviewed

Study Selection

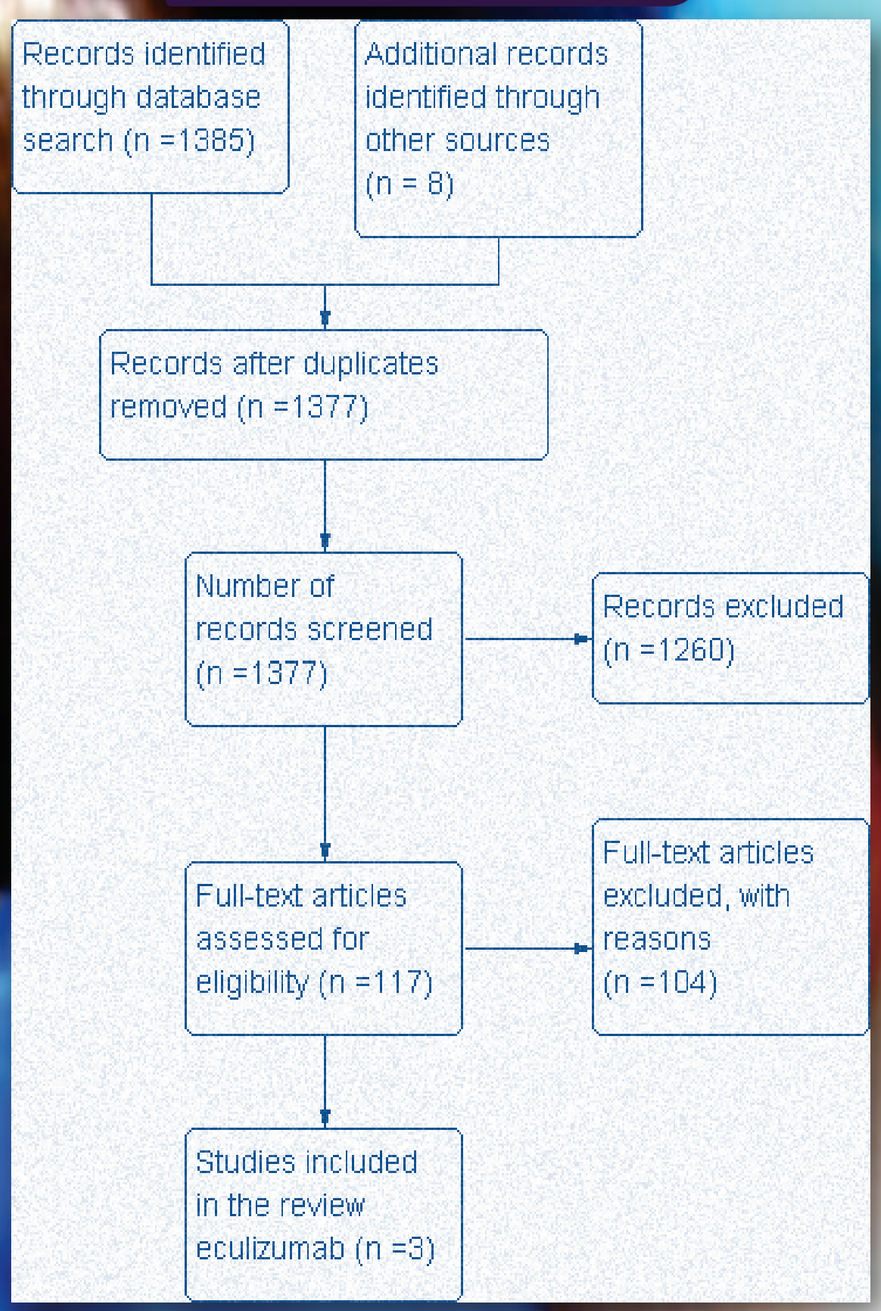
- Patients with aHUS
- Receiving Eculizumab
- All study designs included, except case histories

Data Extraction

Extraction using adapted checklist criteria for non-randomised studies[1]

1.Chambers D, Rodgers M, Woolacott N. Not only randomized controlled trials, but also case series should be considered in systematic reviews of rapidly developing technologies. Journal of Clinical Epidemiology. 2009; 62(12): 1253-1260

Results



The Big Issues

- Inference of treatment effects may be confounded
- Randomising patients with rare diseases may be impractical
- Ethical concerns may prevent use of RCTs
- Transparent reporting of patient recruitment and selection essential
- Study data may be scarce
- Adverse events are frequent

What's needed?

- Complete reporting in orphan diseases
- Long term follow up data
- Guidance on appropriate study designs
- Best practice on recruitment and selection for trials
- Validated surrogate outcomes
- Registries of baseline data
- Adverse event information

Contact Us: j.rathbone@shef.ac.uk

www.scharrheds.blogspot.co.uk www.sheffield.ac.uk/heds