TREATMENT EFFICACY FOR RECTAL *NEISSERIA GONORRHOEAE* – A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

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Background:
Rectal *Neisseria gonorrhoea (*NG) is a common sexually transmitted infection with increasing concerns about antimicrobial resistance. We need to optimise available therapies. This systematic review aimed to assess the efficacy of current treatment regimens, previously available or used drugs and emerging drugs for rectal NG

Methods:
Online bibliographic databases were search from 1 January 1946 to 14 August 2020. All randomised controlled trials (RCTs) with rectal gonorrhoea data among participants aged 15 years or above and published in English were included. Random effects meta-analyses were used to estimate treatment efficacy, defined as microbiological cure, for currently recommended therapies (ceftriaxone±azithromycin), previously available or used therapies (eg ciprofloxacin), and emerging drugs (eg: zoliflodacin). The study protocol was registered on PROSPERO (CRD42020202998).

Results:
54 studies including 1813 participants and 44 treatment regimens were identified. The overall summary treatment efficacy for rectal NG was 100.0% (95% CI: 99.9%-100.0%; I^2=0.0%; p=0.86). Efficacy estimates for single (100.0%; 95%CI: 99.97%-100.0%; I^2= 0.00%; p=0.98) and dual therapies (99.93%; 95%CI: 98.97%-100.0%; I^2= 7.39%; p=0.35) were similar. The efficacy for current treatments (100.00%; 95%CI: 99.96%-100.00%; I^2= 0.00%; p=0.98) was higher than for emerging regimens (97.16%; 95%CI: 86.79%-100.00%; I^2=0.00%; p=0.84). Small sample sizes was a major limitation in identified trials

Conclusion:
Currently used treatments containing ceftriaxone, as single or dual therapy, are effective for rectal NG. Previously used therapies such as spectinomycin or ciprofloxacin are potentially useful for rectal NG.. Emerging drugs such as zoliflodacin may be potentially effective for rectal NG but further data is needed