

Name, Year & Country	Study Type	Clinical Question	No Pts.	Level of Evidence	Outcomes or Results	Secondary data	Reviewers Comments & Assessment of Methodology
1. Fransen 1984 Kenya Lancet	Randomised non blinded  Approx 85% follow up rate	Effectiveness of variable dose IM Kanamycin together with saline/ gentamicin ointment/ Chloramphenicol eye ointment in treating ON  Cases: Neonates presenting with ON	117	2b	Arm 1: 53 infants with GNICD were randomised to receive 75mg IM Kanamycin and either gentamicin eye ointment or N saline eye washes Arm 2: 38 infants with GNICD were randomised to receive 150mg IM of Kanamycin with either gentamicin eye ointment or N saline eye washes Arm 3: 26 infants with GNICD were randomised to receive 150mg of Kanamycin with either gentamicin or Chloramphenicol eye ointment	PPNG between 20-25% 13/117 babies with ON had Chlamydia and did not respond to the initial treatment	Larger study in developing country Probably no prophylaxis offered (though not stated) Significant loss to followup PPNG estimated at 20-25% No bacteriological failures in treatment of ON due to N. gonorrhoeae in those treated with either 75 or 150mg Kanamycin with concomitant use of gentamicin ointment Few treatment failures in other groups One baby treated with 75mg Kanamycin and saline developed sepsis and corneal ulceration No side effect reporting
2. Fransen 1986 Kenya Journal of Inf Dis	Cohort	Describe prevalence of N gonorrhoea and Chlamydia in neonates presenting with ON  Cases: Neonates presenting with ON	149 infants and mothers	2b	64(43%) of babies had N gonorrhoea (23% of these PPNG) 20 (13%) had Chlamydia 6 (4%) had both Overall N gonorrhoeae/ Chlamydia accounted for 60% of all presentations	23% of N gonorrhoea isolates PPNG Extraocular infection with N gonorrhoeae and Chlamydia documented in 17% and 37% of cases	Large cohort set in developing country None received prophylaxis but some had received pre treatment with AB Some of data previously reported (117 patients) Documented one treatment failure with an infant treated with Kanamycin (? Dose) and topical gentamicin: developed corneal ulcers and disseminated N gonorrhoea. 6 infants with mixed infection developed post gonococcal conjunctivitis 3 to 10 days after treatment for N gonorrhoeae
3. Haase 1986 Kenya Sex Transm Dis	Case series	<b>Is single dose Ceftriaxone an effective treatment for ON?</b>  Cases: Neonates presenting with purulent ON and GNICD	7	4	Of 7 neonates, 5 were eye culture positive for N. Gonorrhoeae alone, one positive for Chlamydia alone and one positive for both. All infants were treated with 125mg of IM Ceftriaxone. Those with Chlamydia were also treated with Erythromycin 20mg/ kg bd for 14 days. One infant was lost to final follow up (N. gonorrhoeae only). The 2 infants with Chlamydia showed improvement but not cure. The 4 remaining infants with N. gonorrhoeae showed cure at follow up	PPNG 4/6 66.6% No Chlamydia/N g rate data	Very small observational study No ON prophylaxis programme Neonates less than 4 weeks presenting with purulent eye discharge with eye swabs showing gram neg ICD Treated and then followed at day 1,3,7 and 10 Clinical and microbiological cure demonstrated with Neisseria Study set in a developing country No side effects recorded (no description of tolerance of large dose erythromycin) 4 of 6 isolates were Penicillinase producing

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4. Hoosen 2002 South Africa South African Med Journal	Case series	<b>Effectiveness of low dose (62.5mg) Ceftriaxone treatment for ON</b>  Cases: Neonates presenting with ON And culture pos Ng	21	4	All 21 babies positive for N g demonstrated microbiological cure on swabs taken 24h post treatment 7 infants with concurrent Chlamydia received Erythromycin approx 20mg/kg QID for 7/7	PPNG 10%	Small study No prophylaxis data No side effect data Chlamydia screened for and treated with Erythromycin
5. Laga 1986 Kenya Lancet	Cohort	Describe prevalence of N gonorrhoeae and Chlamydia in neonates and mothers  Cases: Prospective screening of mothers and infants	1013 mothers and 1019 babies (6 twins)	2b	Prevalence of N gonorrhoeae and Chlamydia in birthing mothers was 7 and 29% resp. Identified 181 cases of ON: 31% due to Chlamydia, 12% due to N gonorrhoeae and 3% due to both Transmission rates from mother to child's eye were 42% and 31% resp. for N gonorrhoeae and Chlamydia Rates for transmission to throat were 7 and 2%:	52.4% PPNG	Large prospective cohort study set in developing country No ON prophylaxis More than 30% of women giving birth had N gonorrhoeae/ Chlamydia/ syphilis despite 99% attendance at ANC
6. Laga 1986 Kenya NEJM	Randomised non-blinded	Compare treatment of N gonorrhoeae ON with Ceftriaxone, Kanamycin and topical gentamicin and Kanamycin and topical tetracycline  Cases: Neonates presenting with purulent ON and Gm neg ICDC on gram stain	122	1b	105/122 patients returned for follow up 3 of 61 infants treated with Kanamycin had persistent or recurrent N gonorrhoeae compared to no of 61 receiving Ceftriaxone	28*% PPNG  14.8% concomitant Chlamydia infection	Randomised trial conducted in developed country No ocular prophylaxis but some patients treated with Ab prior to enrolment 3 treatment failures with Kanamycin Poor outcome data for Chlamydia and for extraocular gonococcal infection
7. Latif 1988 Zimbabwe Sex Transm Dis	Cohort	Is single dose Kanamycin together with topical saline irrigation an effective treatment for ON? Cases: Neonates presenting with ON And culture proven Ng	219	2b	219 neonates with culture proven N. gonorrhoeae ON were treated with single dose Kanamycin 100mg IM and saline irrigation. 7 were lost to followup At day 3, N. gonorrhoeae was isolated from 3 babies (1.4%)	PPNG 40/219 18.3% 261 babies with ON of which 219 had culture positive N g	Larger study set in developing country No ON prophylaxis programme 40 babies had Penicillinase producing strains of N. gonorrhoeae 22 of 219 infants with persistent purulent discharge at day 3 but culture negative for N. gonorrhoeae were said to have postgonococcal conjunctivitis and treated with oral erythromycin and tetracycline eye ointment No side effect data reported

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8. Lepage 1988 Rwanda British Journal Ophthalmol	Case series	<b>Is single dose IM Cefotaxime therapy Effective treatment for ON?</b>  Cases: Neonates presenting with ON and culture proven Ng	9	4	100% cure rate for ON (microbiological and clinical) with single dose of 100mg/kg of Ceftriaxone without topical eye treatment	PPNG 5/9 No Ng or Chlamydia rate data	Small study set in developing country 9 infants presenting with symptoms and positive culture from eye swab On child treated with 5/7 of ceftriaxone because of concomitant OM No prophylaxis data No side effect data PPNG 5/9 in this series No reported post gonococcal ON (presumably no concurrent Chlamydia)
9. Lepage 1990 Rwanda Journal of AntimicrobChemo	Case series	<b>Is single dose Cefotaxime therapy effective treatment for N gonorrhoeae ON</b>  Cases: Neonates and Infants presenting with culture proven Ng ON	21 19 only treated with single dose	4	Combined results from earlier study n=9, 1988 12 additional patients, 3 patients older than 1 year For 9 new infant patients, treated with 100mg / kg Ceftriaxone, clinical cure in 100% day 2-5. Microbiological cure demonstrated in 5/5 post treatment cultures obtained.	Overall PPNG rate 57%	Small study set in developing country. Some of the cases previously reported by the same author. 3 older children included in n=21 No side effect data. Some pre-treatment unlikely to significantly affect clinical data. No prophylaxis data Post treatment culture only in 5/9 new infant cases No post gonococcal ON identified (concomitant Chlamydia)
10. Mani 1996 India Journal of Indian Med Ass	Case series	Spectrum of organisms responsible for ON in hospital born babies  Cases: Neonates presenting with ON	30	4	Predominance of pseudomonas with no Ng and only 2 possible Chlamydia infections		No prophylaxis data. Pseudomonas seems to be nosocomially acquired Not all patients were assessed for Chlamydia infection
11. Mohile 2002 India Indian Journal of Ophthalmol	Case series	Report prevalence of organisms responsible for ON  Cases: Neonates presenting with ON	70	4	Chlamydia accounted for 24% (17/70) of babies presenting with ON Other organisms, staph epi, staph A, no Neisseria g	6/17 recurrence of conjunctivitis at 14 weeks with oral erythromycin 40-50mg/kg/day for 14 days	Larger case series in developing country No ON prophylaxis given to babies 12/17 babies with Chlamydia ON developed symptoms before day 4 Not clear whether recurrence of Chlamydia conjunctivitis was due to primary treatment failure (poor compliance/ ineffective treatment) or reinfection. No baby clinically developed Chlamydia pneumonia

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12. Olatunji 2004 Nigeria West African Journal of Medicine	Case control study	Describe causative agents and their Ab sensitivity in ON  Cases: neonates presenting with ON	200 cases 200 controls	3b	200 cases with ON were matched with 200 controls without clinical ON Of 200 cases with ON 111 had organisms isolated 9/111 cases had Chlamydia 1/111 cases had N g 85/111 cases isolated Staph A: 86% sensitive to cefotaxime, 78% sensitive to Kanamycin Of the controls 79/200 had positive isolates 3/ 200 had subclinical Chlamydia 50/400 reported a variety of pre-presentation treatments	Only one case of N g/ 200 9/200 with ON had Chlamydia proven	Large study but mainly descriptive All babies with ON were treated with erythromycin and topical tetracycline No outcome data It is not clear whether the asymptomatic controls were also treated with ab when isolates were positive Chlamydia testing was only performed at 3/6 settings because of poor tolerance to conjunctival scraping (not clear how many were seen at each setting Only 134/400 came to follow up AB sensitivity for N g and Chlamydia not reported