Dialyse peritoneaaldialyse: pyrazinamide 7078

Clcr = creatinineklaring, Vd = verdelingsvolume, PZA = pyrazinamide

Onderbouwend	Bewijs	Effect	Opmerkingen
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Overig	Opmerkingen
Woo J ea. Pyrazinamide and rifampicin regimens for patients on maintenance dialysis. Int J Artif Organs 1988;11(3):181-5. Artikel niet in bezit GIC	We measured pyrazinamide and rifampicin plasma concentrations in five patients with pulmonary tuberculosis and end stage renal failure treated by haemodialysis or continuous ambulatory peritoneal dialysis. Using conventional daily doses of oral pyrazinamide and rifampicin, we found that the drugs were removed efficiently by both dialysis methods, so that plasma levels were sub-optimal for maximal bactericidal action. These findings suggest that in patients with tuberculosis on maintenance dialysis, treatment should be either with higher doses of these two drugs, or with additional replacement doses given after each dialysis. Further detailed pharmacokinetic studies on larger numbers of patients are indicated Werkgroep: studie is niet onderbouwend voor effect dialyse = Ja.
Nahid P ea. Official American thoracic society/centers for disease control and prevention/infectious diseases society of America clinical practice guidelines: treatment of drug-susceptible tuberculosis. Clin Infect Dis 2016; 63:e147-e195. https://academic.oup.com/cid/article/63/7/e147/2196792	Data currently are not available for patients receiving peritoneal dialysis. Until data become available, begin with doses recommended for patients receiving hemodialysis and verify adequacy of dosing using serum concentration monitoring. For patients receiving peritoneal dialysis, there is currently a paucity of pharmacokinetic and dosing data, and the dosages in Table 12 may not apply to patients receiving peritoneal dialysis. Such patients may require close monitoring for toxicity, and measurements of the serum concentrations of antituberculosis drugs before and after peritoneal dialysis should be considered. Patients with renal insufficiency or end-stage renal disease (ESRD) are immunocompromised. Although PZA is metabolized by the liver, its metabolites (pyrazinoic acid and 5-hydroxy-pyrazinoic acid) may accumulate in patients with renal insufficiency. Experts suggest a longer interval between doses (ie, thrice weekly) for PZA. With hemodialysis, PZA and, presumably, its metabolites are cleared to a significant degree. Postdialysis administration of all antituberculosis medications is preferred to facilitate DOT and to avoid premature clearance of drugs such as PZA. **Advies**: bij Clcr < 30 ml/min of hemodialyse: 25–35 mg/kg/dose 3 times/wk (not daily) DOT = directly observed therapy
Ahn C ea. Effect of peritoneal dialysis on plasma and peritoneal fluid concentrations of isoniazid, pyrazinamide, and rifampin. Perit Dial Int 2003;23(4):362-7. Artikel niet in bezit GIC	9 patients on continuous ambulatory peritoneal dialysis (CAPD). Average peak plasma concentrations of isoniazid, rifampin, and pyrazinamide were 3.3 mg/L, 6.5 mg/L, and 30.9 mg/L, respectively, all of which much exceed the minimum inhibitory concentration (MIC) for Mycobacterium tuberculosis. Peritoneal fluid concentrations of isoniazid and pyrazinamide were maintained well above the MICs for M. tuberculosis; however, peritoneal fluid concentration of rifampin was below the therapeutic range most of the time. For the treatment of systemic or pulmonary tuberculosis in CAPD patients, no dose adjustments are required for isoniazid, rifampin, or pyrazinamide.
SPC pyrazinamide maart 2016	Gecontraïndiceerd bij Clcr <25 ml/min. Pyrazinamide wordt uit het bloed geëlimineerd door hemolyse, voornamelijk in de vorm van de actieve metaboliet pyrazinezuur. Patiënten met een verminderde nierfunctie kunnen beter gereduceerde doses voorgeschreven krijgen.

Richtlijn Medicamenteuze behandeling van tuberculose. Herziene versie van de Nederlandse Vereniging van Artsen voor Longziekte; 2014. https://www.nvalt.nl/kwaliteit/richtlijnen/infectieziekten	**Advies**: bij Clcr < 30 ml/min en bij hemodialyse: 30 mg/kg per dosis drie keer per week.

Risicogroep	

Opmerkingen:

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	Wijziging kinetiek	**Effect dialyse**	**Actie**	**Datum**
Beslissing werkgroep	Ja	Onbekend	Ja	24 juni 2019