



Review of Treatment of Latent Tuberculosis Infection

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Background

- ❖ Treatment of latent tuberculosis infection (LTBI) is important for tuberculosis elimination in low-incidence countries.
- ❖ VAPORHCS offers both 3HP (12-dose rifapentine plus isoniazid directly observed therapy) and 9H (9-month daily isoniazid) for treatment of LTBI.
- ❖ Most veterans are treated with 9H despite increasing evidence showing higher rates of completion with 3HP.

Objective

Evaluate rates of completion and adverse events (AE) between veterans treated with 3HP and 9H.

Methods

- ❖ Retrospective chart review of all VAPORHCS patients who initiated LTBI treatment with 9H or 3HP between 01/2011-12/2016.
- ❖ LTBI defined as asymptomatic patients with positive tuberculin skin testing or interferon-gamma release assay.
- ❖ Treatment completion determined through chart documentation.
- ❖ Data of interest included demographics, co-morbid conditions, immunosuppression, treatment completion, and adverse events.

Co-morbidities, n (%)

	9H N = 72	3HP N = 21	p-value
Chronic immunosuppression	23 (31.9)	6 (28.6)	0.78
Corticosteroids	13 (18.1)	5 (23.8)	0.56
TNF inhibitor	12 (16.7)	3 (14.3)	0.79
SOT	10 (13.9)	0	0.07
HIV	9 (13)	2 (10)	0.95
Diabetes	13 (18.1)	8 (38.1)	0.06
Cirrhosis	6 (8.3)	0	0.78
Alcohol use disorder	8 (11.1)	5 (23.8)	0.14

Treatment Completion, n (%)

	9H N = 72	3HP N = 21	p-value
Total patients	62 (86.1)	18 (85.7)	0.96
Chronic immunosuppression	20 (87)	5 (83)	0.80
Corticosteroids	11 (85)	4 (80)	0.80
TNF inhibitor	11 (92)	2 (67)	0.27
SOT	10 (100)	--	--
HIV	9 (100)	2 (100)	1
Diabetes	11 (85)	6 (75)	0.58
Cirrhosis	5 (83)	--	--
Alcohol use disorder	6 (75)	4 (80)	0.84

Adverse Events, n (%)

	9H N = 72	3HP N = 21	p-value
Total	3 (4.4)	3 (14.3)	0.1
Hepatotoxicity	1 (1.4)	0	1
Neurotoxicity	3 (4.2)	1 (4.8)	1
Other	1 (1.4)	2 (9.5)	0.13

Results

- ❖ 93 patients were treated for LTBI.
- ❖ Most patients were white (70.9%) and male (86.0%). Median age was 57 years old.
- ❖ 72 patients (77.4%) were treated with 9H, and 21 (22.5%) were treated with 3HP.
- ❖ **Overall completion rate was 86% in all treated patients.**
- ❖ Completion rates between 9H (86.1%) and 3HP (85.7%) were not significantly different ($p = 0.96$).
- ❖ 23 patients (31.9%) on 9H and 6 patients (28.6%) on 3HP were on chronic immunosuppression with TNF inhibitors and/or corticosteroids ($p = 0.78$) with an overall completion rate of 86%.
- ❖ There were no significant differences in treatment completion rates in sub-groups analysis.
- ❖ 9 patients (13%) on 9H and 2 patients (10%) on 3HP had HIV ($p = 0.95$).
- ❖ Rates of AE were similar (4.4%, 14.3%, $p = 0.1$), including hepatotoxicity and neurotoxicity.

Conclusions

- ❖ Overall treatment completion rates were high and statistically similar between 9H and 3HP groups, even with immunosuppressive therapy.
- ❖ There were no significant differences in rates of adverse events.
- ❖ CDC now recommends 3HP for LTBI treatment by DOT or self-administered therapy in patients ≥ 2 years, including those with HIV/AIDS.

While the majority of patients in this study were treated with 9H, these results identified an opportunity for more use of 3HP, likely without need for DOT going forward.