Clinical Trials Update:

Outcomes from Interventional Studies for Key Drugs Studied by TFORD

September 2020

Task Force on Repurposing of Drugs (TFORD) for COVID-19

S&T Core Group on COVID19 constituted by PSA to GoI

सत्यमेव जयते
Office of Principal Scientific Adviser to the Government of India

Summary

- Slides summarize details of interventional clinical studies with their outcomes for 7 key drugs studied by TFORD
- Only interventional studies have been included in this update
- Data is updated with studies published/released till 20th July 2020
- Detailed information regarding clinical studies and data for other drugs studied by TFORD are listed here - https://docs.google.com/spreadsheets/d/1QOxxC6_vat6vvPPeQwwc8yYmVFyTqx8E0rIfsBdpWrc/edit?usp=sharing
- For more information regarding drugs studied by TFORD please visit - http://www.nclinnovations.org/covid19/

List of Drugs Reviewed in this Update

- Hydroxychloroquine
- Remdesivir
- Tocilizumab
- Favipiravir
- Umifenovir
- Dexamethasone
- IFN-β

Clinical Data Update

Drug # Hydroxychloroquine

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Hydroxychloroquine (HCQ)	AV	Oral	Yes (P)	No

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Gautret et al	France	NR; T	36	Mild	HCQ - Oral/600mg/TID/10D HCQ+ AZT - Oral/500mg-D1 /250mg/QD/4D	**Positive Effect** (several inadequacies from a statistical perspective)
Chen Jun et al	China	RT; T	30	Moderate	HCQ-Oral/400mg/QD/5D	**No effect**
Lee et al	China	NA; P	211	COVID-ve; Exposed	HCQ- 400mg/QD/14D	**Inconclusive due to to lack of controls**
Boulware et al	USA	RT; P	821	COVID-ve; Exposed	HCQ- 800 mg+600mg/QD/D1, 600 mg QD/4D	**No effect**
Tang et al	China	RT; T	150	Mild/Moderate/ Severe	HCQ-1200 mg/QD/3D; 800 mg/QD/14D-21D	**No effect**
Torjesen et al (Recovery Trial)	UK	RT; T	4764	Hospitalized	HCQ – 10 days; Dose data not available	**No effect (Interim data)**
Chen et al	China	RT; T	48	Moderate	HCQ - 200 mg/ BID/10D	**No effect**
Cavalcanti et al	Brazil	RT; P & T	667 (504 COVID+ve)	COVID-ve; Mild/Moderate	HCQ - 400 mg/BID/7D HQ + AZT - 400 mg/BID+ 500 mg/QD/7D	**No effect**
Skipper et al	USA, Canada	RT; P & T	395	COVID-ve exposed, COVID+ve Mild	HCQ- 800 mg+600mg/QD/D1, 600 mg QD/4D	**No effect**

Published | Pre-prints/Press release/Others

AV- Anti-viral; AI – Anti-inflammatory; AC – Anti-coagulant; T - Therapeutic; P - Prophylactic; CM - Used for clinical management (according to clinical management guidelines); ^ - Only includes interventional trials ; RT – Randomized Trial; NR – Non-randomized studies; NA – Data not available

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Data for interventional trials updated till 20th July 2020

Clinical Data Update

Drug # Remdesivir

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Remdesivir (RDV)	AV	Injectable	Yes (T)	Yes (T)

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Grein et al	9 countries	NR; T	53	Severe	RDV- 200mg/D1; 100mg/QD/9D	**Positive effect** (study has no control arm)
Spinello et al	Italy	NR; T	35	Severe	RDV- 200mg/D1; 100mg/QD/ 9D	**Inconclusive due to to lack of controls**
Beigel et al	US	RT; T	1063	NA	RDV- 200mg/D1; 100mg / QD/9D	**Positive effect** (Interim Data)
Goldman et al	US	RT; T	397	Severe	RDV- 200mg/D1; 100mg/ QD/9D	**No effect** (Interim data, no control arm)
Gilead Announcement	180 sites; 15 countries	RT; T	NA	Moderate	RDV- 5 or 10 day treatment; Dose data not available	**Positive effect (5D)**
Wang et al	China	RT; T	237	Moderate/Severe	RDV- 200mg/D1; 100mg/ QD/2-10D	**No effect**

Published **Pre-prints/Press release/Others**

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Clinical Data Update

Drug # Tocilizumab

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Tocilizumab (TCZ)	AI	Injectable	No (CM)	No (CM)

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Morena et al	Italy	NR; T	51	Severe	TCZ-35% -400mg/BID; 65% - 8mg/kg/BID	**Inconclusive due to lack of controls**
Montalava et al	Spain	NR; T	82	Severe	TCZ- 400mg or 600mg /Once	**Inconclusive due to lack of controls**
Perrone et al	Italy	NR; T	1221	Moderate/Severe	TCZ-8 mg/kg/QD or BID	**Positive effect** (Single arm study; effective sample size is only about 180)
Sciascia et al	Italy	NR; T	63	Severe	TCZ-8 mg/kg/Once or twice	**Positive effect** (Single arm study, no control)
Stohbehn et al	USA	NR; T	32	Mild/Moderate	TCZ- Group A- 200mg/120 mg/once TCZ- Group B- IV/80mg/once	**Positive effect**
Roche Press Release (COVACTA)	NA	RT; T	450	Severe	TCZ- 8 mg/kg, up to a maximum dose 800 mg	**No effect**

Published **Pre-prints/Press release/Others**

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Clinical Data Update

Drug # Favipiravir

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Favipiravir (FPV)	AV	Oral	Yes	Yes

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Cai et al	China	NR; T	80	Mild/Moderate	FPV -1600mg/BID/D1; 600mg /BID/D2-14	**Positive effect**
Chang Chen et al	China	RT; T	240	NA	FPV- 1600 mg/BID/D1; 600 mg/BID/D2 –D7,10 UFV-200mg/TID/7-10D	**No effect**
Lou et al	China	RT; T	30	Mild	FPV- 1600 mg or 2200mg/ D1 /600mg/TID/D5-D14 Baloxavir- 80mg/QD/D1,7,14	**No effect**
Glenmark Press Release	India	RT; T	NA	Mild/Moderate	FPV- 3,600 mg (1,800 mg BID) D1 + 1,600 mg (800 mg BID) (D2 or later)/14D	**Positive effect** (Improvement over the control arm was only numerical, and not statistically significant)

Published **Pre-prints/Press release/Others**

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Clinical Data Update

Drug # Umifenovir

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Umifenovir (UFV)	AV	Oral	No	No

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Li et al	China	RT; T	44	Mild/Moderate	UFV-100mg/TID/7-14D Lopinavir/Ritonavir-200mg-50mg/BID/7-14D	**No effect**
Chang Cheng et al	China	RT; T	240	NA	UFV-200mg/TID/7-10D FPV- 1600 mg/BID/D1; 600 mg/BID/D2 –D7,10	**No effect**

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Clinical Data Update

Drug # Dexamethasone

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Dexamethasone (DEX)	AI	Oral	No (CM)	Yes

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Horby et al (RECOVERY Trial)	UK	RT; T	6425	NA	DEX - 6 mg/QD/upto 10D	**Positive effect (Interim Data)**

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Clinical Data Update

Drug # IFN-β

Drug	Type	Route of Administration	Approved for COVID-19	
			India	Others
Interferon Beta (IFN-β)	AI	Injectable	No	No

Study ^	Location	Study Type	Population Size	Stage	Dose	Outcome & Remarks (TFORD View)
Davoudi-Monfared et al	Iran	RT; T	81	Hospitalized /Severe	IFN-β-1a- 44 micrograms/ml (12 million IU/ml)/SC/TID/14D (Add on treatment)	**Positive effect**
Synairgen Press Release	UK	RT; T	101	Hospitalized	SNG001 – Inhaled version of IFN-B-1a Dose - NA	**Positive effect**

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