Supplemental Materials

Table 2. Summary of Case Reports of iTTP and COVID-19 Infection.

Author	Age, Gender	COVID-19 diagnosis	TTP de novo or relapse	TTP Diagnosis	Clinical/Laboratory Presentation	Treatment	Outcome
AL-Ansarin	51 M	Positive NP swab	De novo	Clinical	Hgb nadir 60, Plt 45-50, LDH 757, Cr 227 (CRRT), ischemic stroke	TPE	Survived
Albiol	57 F	Negative PCR, positive IgG	De novo	ADAMTS13 activity <10%, positive inhibitor	Hgb 69, Plt 13, LDH 1594, Cr 63.66	TPE, steroids, IVIG, plasma transfusion	Unknown
Altowyan	39 M	Positive test	De novo	PLASMIC score = 6	Hgb 77, Plt 6, LDH 1600, Cr 77, ischemic stroke, acute psychosis	TPE, steroids, rituximab, COVID-19 management	Survived
Aminimogh-addam	21 F	Positive NP swab	De novo	Clinical	Hgb 50, Plt 21, LDH 1910, Cr 495.15	TPE	Survived
Beaulieu	70 M	Positive	De novo	ADAMTS13 activity <10%, antibody positive	Hgb 60, Plt 18, LDH 1422, Cr 106, seizure, confusion	TPE, steroids, plasma transfusion	Survived
Capecchi	55 F	Swab negative x2, positive IgG	Relapse	ADAMTS13 activity <10%, antibody positive	Hgb 74, Plt 14, LDH 18015, Cr 276.75, troponin 1426 ng/mL, ischemic stroke with petechial hemorrhage	TPE, steroids, plasma transfusion, caplacizumab	Survived
Cohen	62 F	1st swab negative, 2nd swab positive	De novo	ADAMTS13 activity <10%, antibody positive	Hgb 95, Plt 41, LDH 937, Cr 87.54	TPE, steroids, plasma transfusion, caplacizumab, rituximab	2 TTP relapses, survived
Darnahal	56 F	Positive NP swab	De novo	ADAMTS13 activity <10%, antibody positive	Hgb 60, Plt 41, LDH 2245, ICH	TPE, rituximab	Deceased (severe lung involvement and hemorrhagic stroke)
Dhingra	35 F	Positive NP and oropharyngeal swab	De novo	ADAMTS13 activity <10%, inhibitor positive	Hgb 82.5, Plt 20, LDH 10977, Cr 66.32, ischemic stroke, seizure	TPE, vincristine, rituximab	Survived

Dorooshi	81 F	Positive PCR	De novo	Clinical	Hgb 72, Plt 52, LDH 2237, Cr 786.94 to 804.62, loss of consciousness	Steroids, plasma transfusion	Deceased (cardiac arrest)
Hindilerden	74 F	Positive swab	De novo	ADAMTS13 activity <10%, inhibitor positive	Hgb 66, Plt 48, LDH 1108, confusion	TPE, steroids	Survived
Law	47 F	Positive NP swab	De novo	ADAMTS13 activity <10%, inhibitor positive	Hgb 70, Plt 14, LDH 2229, Cr 88.42, seizure	TPE, caplacizumab	Survived
Maharaj	69 F	Positive NP PCR	Relapse	Clinical, ADAMTS13 deficient at COVID-19 diagnosis	Left femoral catheter-associated deep vein thrombosis (2weeks after COVID diagnosis)	Relapse 1: TPE, steroids Relapse 2: TPE, steroids, intolerant to rituximab Relapse 3: TPE, steroids	3 TTP relapses, deceased (refractory hypoxia and severe multi-organ failure)
Nicolotti	44 F	Positive pharyngeal swab	De novo	ADAMTS13 activity <10%, antibody positive	Plt 7, LDH 2961, Cr 203.37, confusion, left hemiparesis	TPE, steroids, rituximab, caplacizumab	Survived
Shankar	30 M	Positive PCR	De novo	ADAMTS13 activity <10%, inhibitor positive	Hgb 137, Plt 9, LDH 1375, Cr 133.51	TPE, steroids, plasma transfusion, caplacizumab	Survived
Tehrani-1	25 F	Lung imaging and PCR	De novo	ADAMTS13 antigen low, antibody positive	Hgb 70 , Plt 10.5, LDH 3465	TPE	Survived
Tehrani-2	56 F	Lung imaging and PCR	De novo	ADAMTS13 antigen low, antibody positive	Hgb 60, Plt 41, LDH 1520, hemorrhagic stroke	TPE, rituximab	Deceased (hemorrhagic stroke)
Tehrani-3	57 F	Lung imaging and PCR	De novo	ADAMTS13 antigen normal, antibody positive	Hgb 79, Plt 98, LDH 1150	Plasma transfusion (TPE unavailable), IVIG	Survived
Tehrani-4	38 M	Lung imaging and PCR	De novo	ADAMTS13 antigen low, antibody positive	Hgb 80, Plt 5, LDH 545	TPE, rituximab, IVIG	Survived

Verma	21 M	Positive RT-PCR	De novo	PLASMIC score=7	Hgb 59, Plt 10	Plasma transfusion (TPE intolerance), dexamethasone (for COVID-19 infection and HLH), IVIG (for HLH)	Developed HLH; deceased (pneumothorax, secondary lung infection, progressive cachexia and possible progression of TTP)

Abbreviations: M male and F female; NP nasopharyngeal; Hgb hemoglobin (g/L); Plt platelet (x10^9/L); LDH lactate dehydrogenase (U/L); Cr creatinine (umol/L); CRRT continuous renal replacement therapy; TPE therapeutic plasma exchange; IVIG intravenous gammaglobulin; ICH intracranial hemorrhage; HLH hemophagocytic lymphohistiocytosis.

Note: The literature search was last updated on January 30, 2022.

Table 3. Summary of Case Reports of iTTP Following COVID-19 Vaccination.

Report	Patient Age (years) and Gender	Type of COVID19 Vaccine	First or Second Dose	Time to TTP Presentation	De novo vs Relapse TTP
Al-Ahmad et al	37, male	AstraZeneca Oxford COVID-19 vaccine	First	3 weeks	De novo
Alislambouli et al	61, male	BNT162b2 (Pfizer)	First	5 days	De novo
Chamarti et al	80, male	BNT162b2 (Pfizer)	Second	2 weeks	De novo
Fang et al	70s, male	mRNA-1273 (Moderna)	First	7 days	Relapse
de Bruijin et al	38, female	BNT162b2 (Pfizer)	Second	3 weeks	De novo
Francisco et al	57, male	mRNA-1273 (Moderna)	Second	7 weeks	Relapse
Herrman et al	"elderly", female	mRNA-1273 (Moderna)	Third	8 days	De novo
Karabulut et al	48, male	mRNA-1273 (Moderna)	First	5 days	Relapse
Li et al	50, female	ChAdOx1 nCoV-19 vacccine (Vaxzevria)	First	12 days	De novo
Osmanodia et al	25, male	mRNA-1273 Moderna Spikevax	First	13 days	De novo
Sissa et al	48, female	BNT162b2 (Pfizer)	Second	6 days	Relapse
Pavenski	84, male	BNT162b2 (Pfizer)	First	7 days	Relapse
Waqar et al		BNT162b2 (Pfizer)	Second	1 week	De novo
Yocum et al	62, female	Ad26.COV2.S (Johnson & Johnson	N/A	37 days	De novo
Yoshida et al	57, male	BNT162b2 (Pfizer)	First	2 weeks	De novo

Note: The literature search was last updated on January 30, 2022. Only cases where TTP diagnosis was confirmed by ADAMTS13 activity testing were included.

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