

코로나바이러스 감염증-19 (COVID-19) 약물 치료에 관한 대한감염학회 지침
(요약본)

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본 권고안은 현재 국내 실정을 고려한 코로나바이러스 감염증-19 (COVID-19, 이하 코로나 19) 환자의 약물적 치료에 대한 기본적인 원칙을 제시하는 것으로서, 모든 대상자에 대해서 본 지침을 일률적으로 적용하는 것보다는 기본적으로 참고하되 각 환자의 여러 상황들을 고려한 의사의 최종적인 판단에 의한 진료가 중요하다. 또한 본 권고안은 개인적인 진료 및 교육 목적으로 활용될 수 있지만 상업적인 목적이나 진료 심사 목적 등으로 사용될 수 없으며, 어떠한 형태로든 다른 목적으로 사용하고자 하는 경우에는 지침 개발위원회에 서면 요구서를 제출하여 서면 동의를 받아야 한다.

이번 가이드라인은 대한감염학회와 한국보건의료연구원이 협업하여 코로나19 입원 환자의 치료에서 우선적으로 고려되는 약물들의 최신 근거 및 국외 권고를 검토하여 근거기반 방법론을 적용하여 권고안을 도출하였다. 다만, 코로나 19의 응급한 상황으로 인해 단기간에 신속한 권고문 개발이 요구되었기 때문에 폭넓은 다학제 구성이나 모든 데이터베이스의 검색과 같은 일부 방법론적인 부분을 엄격하게 적용할 수 없었다는 제한점이 있다.

향후 대한의학회 산하 여러 전문학회와 협업하여 범위와 임상질문을 좀더 확장하여 시간적 제약으로 인해 확인하지 못한 추가적인 치료방법 및 비약물적 중재법 등에 대해서도 최신의 근거기반 방법론을 적용한 권고문을 추가로 도출하고자 한다.

CQ1. 렘데시비르(Remdesivir)

1-1. 코로나19 입원 환자에게 임상적 중증도에 관계없이 렘데시비르(Remdesivir) 투여를 권고하는가?

1-2. 코로나19 입원 환자에서 산소치료가 요구되는 경우, 렘데시비르(Remdesivir) 투여를 권고하는가?

- 1-1. 산소치료가 필요하지만 인공호흡기나 ECMO 치료까지 필요하지 않는 코로나19 환자에게 렘데시비르(Remdesivir)를 사용할 수 있다. (근거수준: 중등도, 권고등급: B)

1-2. 1번에 해당되지 않는 코로나19 환자들에게 렘데시비르의 투여에 대한 권고를 보류한다. (근거수준: 중등도, 권고등급 : I (권고보류))

CQ2. 하이드록시클로로퀸(Hydroxychloroquine) +/- 아지스로마이신(azithromycin)

코로나19 환자에게 하이드록시클로로퀸(Hydroxychloroquine, HCQ) 혹은 하이드록시클로로퀸과 아지스로마이신(azithromycin, AZM) 병합 투여를 권고하는가?

코로나19 환자에게 하이드록시클로로퀸(Hydroxychloroquine, HCQ) 단독 투여나 아지스로마이신(azithromycin, AZM)과의 병합 투여를 모두 권고하지 않는다. (근거수준: 높음, 권고등급: C)

CQ3. 로피나비르/리토나비르(Lopinavir/ritonavir)

코로나19 환자에게 로피나비르/리토나비르(lopinavir/ritonavir, LPV/r) 투여를 권고하는가?

코로나19 환자에게 로피나비르/리토나비르(lopinavir/ritonavir, LPV/r)의 투여를 권고하지 않는다. (근거수준: 높음, 권고등급: C)

CQ4. 기타 항바이러스제(favipiravir, ribavirin, umifenovir, baloxavir marboxil 등)

코로나19 환자에게 파비피라비르(favipiravir), 리바비린(ribavirin), 우미페노비르(umifenovir), 발록사비르(baloxavir marboxil) 등 기타 바이러스 억제 효과가 있다고 알려진 약제의 투여를 권고하는가?

코로나19 환자에게 파비피라비르(favipiravir), 리바비린(ribavirin), 우미페노비르(umifenovir), 발록사비르(baloxavir marboxil) 등 기타 바이러스 억제 효과가 있다고 알려진 약제 투여는 임상시험 외에는 권고하지 않는다. (근거수준: 낮음, 권고등급: C)

CQ5. 스테로이드(Steroid)

코로나 19 환자에게 스테로이드(steroid) 투여를 권고하는가?

5-1. 중증(severe) 또는 심각한(critical) 코로나19 환자에게 스테로이드(Steroid) 투여를 권고한다.

(근거수준: 중등도, 권고등급: A)

* 임상적 고려사항: 스테로이드는 하루 덱사메타손 6 mg을 7-10일간 투여하며, 다른 스테로이드를 같은 역가로 대체 투여 할 수 있다. (하이드로코티손 150-200 mg, 프레드니손 40 mg, 메틸프레드니솔론 32 mg)

5-2. 중증이 아닌 코로나19 환자 (non-severe)에 대해서는 스테로이드 투여를 권고하지 않는다

(근거수준: 중등도, 권고등급 : C)

CQ6. 인터루킨-6(Interleukin-6) 억제제(tocilizumab, sarilumab 등)

코로나19 환자에게 토실리주맙(tocilizumab), 사릴루맙(sarilumab) 등 인터루킨-6(Interleukin-6, IL-6) 억제제의 투여를 권고하는가?

- 6-1. 중증 코로나19 환자에게 인터루킨-6(Interleukin-6, IL-6) 억제제는 임상 시험 범위 내에서 사용할 수 있다. (근거수준: 중등도, 권고등급: B)
- 6-2. 경증 코로나19 환자에게 인터루킨-6 억제제 투여를 권고하지 않는다. (근거수준: 중등도, 권고등급 : C)

CQ7. 인터루킨-1(Interleukin-1) 억제제

코로나 19 환자에게 인터루킨-1(Interleukin-1, IL-1) 억제제 투여를 권고하는가?

코로나19 환자에게 인터루킨-1(Interleukin-1, IL-1) 억제제 투여에 대한 권고를 보류한다.
(근거수준: 낮음, 권고등급: I (권고보류))

CQ8. 인터페론(Interferon)

코로나 19 환자에게 인터페론(Interferon) 투여를 권고하는가?

코로나19 환자에게 인터페론(Interferon)은 임상 시험 범위 내에서 사용할 수 있다.
(근거수준: 낮음, 권고등급: B)

CQ9. 회복기 혈장 치료

코로나19 환자에게 회복기 혈장 치료를 권고하는가?

코로나19 환자에게 회복기 혈장 치료에 대한 권고를 보류한다. (근거수준: 낮음, 권고등급: I)

CQ10. 정맥용 면역글로불린(conventional intravenous immunoglobulin)

코로나 19 환자에게 일반적인 정맥용 면역글로불린 (Conventional IVIG) 투여를 권고하는가?

코로나19 환자에게 일반적인 정맥용 면역글로불린 (conventional intravenous immunoglobulin, IVIG) 투여는 권고하지 않는다. 다만 합병증 치료에서 적응증이 될 때에는 면역글로불린 사용을 배제하지 말아야 한다.
(근거수준: 낮음, 권고등급: C)

* 이 내용은 웹사이트 요약본으로 전체 가이드라인의 일부 문장을 조금 수정한 부분이 있습니다.

GRADE 근거수준과 의미

근거수준	정의
높음 (high)	효과의 추정치가 실제 효과에 가깝다는 것을 매우 확신할 수 있다.
중등도 (moderate)	효과의 추정치에 대한 확신을 중등도로 할 수 있다. 효과의 추정치는 실제 효과에 근접할 것으로 보이지만 상당히 다를 수도 있다.
낮음 (low)	효과의 추정치에 대한 확신이 제한적이다. 실제 효과는 효과 추정치와 상당히 다를 수 있다.
매우 낮음 (very low)	효과의 추정치에 대한 확신이 거의 없다. 실제 효과는 효과의 추정치와 상당히 다를 것이다.

GRADE 권고등급과 의미

	권고등급	정의
근거 기반 권고	A (Strong for recommend)	강하게 권고함 해당 치료의 이득과 위해, 근거수준, 가치와 선호도, 자원을 고려했을 때 대부분의 임상상황에서 강하게 권고한다.
	B (Conditional recommend)	조건부 권고함 해당 치료의 사용은 임상상황 또는 환자/사회적 가치에 따라 달라질 수 있어, 선택적으로 사용하거나 조건부로 선택할 것을 제안한다.
	C (against recommend)	시행을 권고하지 않음 해당 치료의 위해가 이득보다 더 클 수 있고, 임상적 상황 또는 환자/사회적 가치를 고려하여, 시행을 권고하지 않는다.
	I 권고 보류(inconclusive)	해당 치료의 이득과 위해, 근거수준, 가치와 선호도, 자원을 고려했을 때 근거수준이 너무 낮거나, 이득/

		<p>위해 저울질이 심각하게 불확실, 또는 변이가 커서 중재 시행여부를 결정하지 않는다. 이는 치료의 사 용을 권하거나 반대할 수 없다는 의미로서, 임상 의 판단을 따르도록 한다</p>
<p>전문가 합의 권고 (Expert consensus)</p>		<p>임상적 근거문헌은 부족하나 해당 치료의 이득과 위해, 근거수준, 가치와 선호도, 자원을 고려했을 때 임상적 경험과 전문가의 합의에 따라 사용을 권고 한다.</p>

● 권고문 요약

임상질문	권고문	근거수준	권고등급
CQ1. Remdesivir	1-1. 산소치료가 필요하지만 인공호흡기나 ECMO치료까지 필요하지 않는 코로나19 환자에게 렘데시비르(Remdesivir)를 사용할 수 있다.	중등도	B
	1-2. 1번에 해당되지 않는 코로나19 환자들에게 렘데시비르의 투여에 대한 권고를 보류한다.	중등도	I
CQ2. HCQ +/- azithromycin	코로나19 환자에게 하이드록시클로로퀸(Hydroxychloroquine, HCQ) 단독 투여나 아지스로마이신(azithromycin, AZM)과의 병합 투여를 모두 권고하지 않는다.	높음	C
CQ3. LPV/r	코로나19 환자에게 로피나비르/리토나비르(lopinavir/ritonavir, LPV/r)의 투여를 권고하지 않는다	높음	C
CQ4. 기타 항바이러스제	코로나19 환자에게 파비피라비르(favipiravir), 리바비린(ribavirin), 우미페노비르(umifenovir), 발록사비르(baloxavir marboxil) 등 기타 바이러스 억제 효과가 있다고 알려진 약제 투여는 임상시험 외에는 권고하지 않는다.	낮음	C
CQ5. 스테로이드	5-1. 중증(severe) 또는 심각한(critical) 코로나19 환자에게 스테로이드(Steroid) 투여를 권고한다	중등도	A
	임상적 고려사항: 스테로이드는 하루 덱사메타손 6 mg을 7-10일간 투여하며, 다른 스테로이드를 같은 역가로 대체 투여 할 수 있다. (하이드로코티손 150-200 mg, 프레드니손 40 mg, 메틸프레드니솔론 32 mg)		

	5-2. 중증이 아닌 코로나19 환자 (non-severe)에 대해서는 스테로이드 투여를 권고하지 않는다	중등도	C
CQ6. IL-6 억제제	6-1. 중증 코로나19 환자에게 인터루킨-6 (Interleukin-6, IL-6) 억제제는 임상 시험 범위 내에서 사용할 수 있다	중등도	B
	6-2. 경증 코로나19 환자에게 인터루킨-6 억제제 투여를 권고하지 않는다	중등도	C
CQ7. IL-1 억제제	코로나19 환자에게 인터루킨-1(Interleukin-1, IL-1) 억제제 투여에 대한 권고를 보류한다	낮음	I
CQ8. Interferon	코로나19 환자에게 인터페론(Interferon)은 임상 시험 범위 내에서 사용할 수 있다.	낮음	B
CQ9. 회복기 혈장	코로나19 환자에게 회복기 혈장 치료에 대한 권고를 보류한다.	낮음	I
CQ10. Conventional IVIG	코로나19 환자에게 일반적인 정맥용 면역글로불린 (conventional intravenous immunoglobulin, IVIG) 투여는 권고하지 않는다. 다만 합병증 치료에서 적응증이 될 때에는 면역글로불린 사용을 배제하지 말아야 한다 .	낮음	C

[참고 문헌]

CQ1.

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CQ2.

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