臺北市立聯合醫院
TAIPEI CITY HOSPITAL



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COMMENT | ONLINE FIRST

Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury

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摘要 Summary

	Outcomes of corticosteroid therapy*	Comment
MERS-CoV	Delayed clearance of viral RNA from respiratory tract[2]	Adjusted hazard ratio 0·4 (95% CI 0·2–0·7)
SARS-CoV	Delayed clearance of viral RNA from blood[5]	Significant difference but effect size not quantified
SARS-CoV	Complication: psychosis[6]	Associated with higher cumulative dose, 10 975 mg *vs* 6780 mg hydrocortisone equivalent
SARS-CoV	Complication: diabetes[7]	33 (35%) of 95 patients treated with corticosteroid developed corticosteroid-induced diabetes
SARS-CoV	Complication: avascular necrosis in survivors[8]	Among 40 patients who survived after corticosteroid treatment, 12 (30%) had avascular necrosis and 30 (75%) had osteoporosis
Influenza	Increased mortality[9]	Risk ratio for mortality 1·75 (95% CI 1·3–2·4) in a meta-analysis of 6548 patients from ten studies
RSV	No clinical benefit in children[10,11]	No effect in largest randomised controlled trial of 600 children, of whom 305 (51%) had been treated with corticosteroids

CoV=coronavirus. MERS=Middle East respiratory syndrome. RSV=respiratory syncytial virus. SARS=severe acute respiratory syndrome. *Hydrocortisone, methylprednisolone, dexamethasone, and prednisolone.

Table: **Summary of clinical evidence to date**

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到目前為止，使用類固醇臨床證據包括:MERS SARS會延緩病毒清除，SARS生還者並增加引起糖尿病.關節壞死.骨質疏鬆.急性精神併發症相關性機率，增加流感死亡率.兒童呼吸道融合病毒感染無助益

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背景Background

- 由於2019新型冠狀病毒的病理機轉與治療仍未明朗，而之前2002的SARS . 2012的MERS都曾經因為認為是病毒性肺炎，為了降低發炎而使用corticosteroid類固醇，本文作一回顧性報告 ,結論是不建議使用。
- 這部分在1/25 Lancet就提過了!

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SARS MERS.延緩病毒清除

使用類固醇corticosteroid理由是因為hemo-phagocytosis持續進行 ，所以使用類固醇降低發炎反應。

但是證據顯示使用類固醇反而延緩 MERS呼吸道及SARS血液中RNA病毒清除。

MERS-CoV Delayed clearance of viral RNA from respiratory tract Adjusted hazard ratio 0·4 (95% CI 0·2–0·7)

Significant difference but effect size not quantified

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SARS 併發症 精神症相關性較高

- 研究證實高累積劑量10975 mg 比6780 mg hydrocortisone相當劑量與精神症Psychosis相關性較高
- SARS-CoV Complication: psychosis --Associated with higher cumulative dose, 10975 mg vs 6780 mg hydrocortisone equivalent

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SARS 併發症 糖尿病使用類固醇較高

- 1/3使用類固醇有併發症 糖尿病
- SARS-CoV Complication: diabetes 33 (35%) of 95 patients treated with corticosteroid developed corticosteroid-induced diabetes

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SARS併發症:生還者壞死性關節與骨質疏鬆使用類固醇較高

- SARS生還者使用類固醇者 30%壞死性關節，75%骨質疏鬆
- SARS-CoV Complication: avascular necrosis in survivors Among 40 patients who survived after corticosteroid treatment, 12 (30%) had avascular necrosis and 30 (75%) had osteoporosis

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增加流感死忙率

- 流感使用類固醇增加死亡率，risk ratio是1.75。
- Influenza Increased mortality Risk ratio for mortality 1·75 (95% CI 1·3–2·4) in a meta-analysis of 6548 patients from ten studies

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呼吸道融合病毒對兒童無助益 其他敗血症或休克無證明有效

- 呼吸道融合病毒在大規模600例的隨機臨床試驗.使用類固醇對兒童無助益
- RSV No clinical benefit in children. No effect in largest randomised controlled trial of 600 children, of whom 305 (51%) had been treated with corticosteroids
- 其他如septic shock (某一報告:5%新冠狀病毒病患) sepsis 都沒有證明使用類固醇有效。

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結論

- 大致上，2019-nCoV新冠狀病毒感染沒有單一理由證明可以使用類固醇改善病情，反而弊大於利，所以不應該在2019-nCoV新冠狀病毒感染的肺損傷或是休克的臨床試驗外使用類固醇。
- 也就是不建議。在2019-nCoV新冠狀病毒感染的肺損傷或是休克使用類固醇

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