算一算："MATH+" 挽救了生命

作者：Michael Passwater；翻譯：李梅；审阅：成长

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(OMNS 2020 年 12 月 23 日) 随着 SARS-CoV-2 大流行进入北美，5 名经验丰富的重症监护医生组成了“一线 Covid-19 重症监护联盟”(FLCCC 联盟)。这个最初由危重护理医生 Pierre Kory、G. Umberto Meduri、Jose Iglesias、Joseph Varon 和 Paul Marik 组成的工作组，过去和现在都致力于发展和完善 Covid-19 治疗方案。2017 年，随着静脉注射羟可的松(皮质醇)、抗坏血酸(维生素 C)和硫胺素(维生素 B1)放进标准的脓毒血症护理中，Paul Marik 博士对脓毒血症的治疗方面取得了巨大成功，包括脓毒血症休克。这被称为治疗脓毒血症的“HAT”理论，它是 FLCCC 联盟抗击 Covid-19 的起点。鉴于 Covid-19 的复杂性，“HAT”疗法迅速扩充为“MATH+”，用于 Covid-19 住院患者的护理。

M＝甲基强的松龙;80mg 负荷剂量，然后 40mg/12h，至少 7 天，直到转出 ICU

A ＝抗坏血酸;3 g IV /6h，至少 7 天和/或直到转出 ICU。

T ＝ 硫胺素：200mg/12h 静脉滴注，

H ＝ 肝素（低分子量肝素）：皮下注射 1mg /Kg/12h，禁忌除外

＋＝维生素 D3，褪黑素，锌，镁，复合维生素 B，阿托伐他汀，法莫替丁，如有需要，可进行血浆置换治疗

“如果你正在做的事情不起作用，那就改变你正在做的事情。”(Paul E. Marik 医学博士)

早期干预和避免机械通气也是 2 个关键方面。截至 2020 年 7 月，实施 MATH+方法的两家医院的结果已经完成了同行评审，现在已在网上公布。他们的发现似乎是奇迹。德克萨斯州休斯顿联合纪念医疗中心的 Joseph Varon 博士的团队截至 7 月份治疗了 140 名住院的 Covid-19 患者，存活率为 95.6%，弗吉尼亚州诺福克森塔拉诺福克综合医院的 Paul Marik 博士的团队治疗了 191 名住院的 Covid-19 患者，存活率为 93.9%。不同的地方是，UMMC 在

急症室开始方案，而诺福克综合医院在重症监护室进行。相比之下，美国、英国和中国的其他 461 家没有使用 MATH+方案的医院公布的生存率从 68%到 84.4%不等。美国疾病控制与预防中心报告称，在 11 月的最后一周，美国有 5000 多名 Covid-19 住院患者，广泛使用 MATH+方案可能意味着未来几个月将增加数千名幸存者。截至 2020 年 12 月 18 日，报告使用部分或全部 MATH+方案的医生数量已经增长到 120 多名。

本文的结论是:

"...COVID-19 中发现的多种病理生理机制可能需要多种治疗药物协同作用，以抵消这种异常免疫反应的多种有害后果。要找到一颗“灵丹妙药”，甚至一种能在疾病的多个阶段都有效的药物，都是极其不可能的。Math+治疗方案提供了一种廉价的，安全性众所周知的药物组合，这种基于强大的生理学原理和不断增加的临床证据基础，潜在地为 COVID-19 患者的管理提供了一种挽救生命的方法。”

能在医院里存活下来说明治疗效果不错，但如果身体健康到不需要住院治疗就更好了。FLCCC 联盟开发了用于门诊护理的 I-MASK 协议。10 月，伊维菌素药物加入住院(MATH+)和门诊(I-MASK)方案。伊维菌素是一种廉价、广泛使用的药物，因其抗寄生虫作用获得 2015 年诺贝尔生理学或医学奖。它似乎也是一种有效的抗病毒药物。

这项研究增加了数十份出版物的数量，包括两项与维生素 D 有关的前瞻性随机对照试验，将充足的维生素 D、锌、维生素 C 和/或硒蛋白更好的联合起来用于对抗 Covid-19。

SARS-CoV-2 大流行的发现和警示:

1. 抗坏血酸在对抗已知和未知的传染性病原体时是非常有效的。这一点自 20 世纪 40 年代以来就已经为人所知。Marik 博士最近的工作帮助扩大我们对抗炎和内皮细胞(血管)来自抗坏血酸和皮质醇共同增效作用起到的治疗效果的理解。

   a. 严重的 Covid-19 疾病威胁生命的三个最主要方面是高炎症、高凝和严重缺氧。抗坏血酸对免疫细胞、内皮细胞和气道组织的作用有助于缓解这三个问题。
   b. 在重症监护中，静脉注射皮质醇和抗坏血酸可在几分钟内开始逆转糖蛋白质复合物和内皮细胞损伤。
   c. 定时、定量给药维持一个稳定的状态会更好，因为抗坏血酸的半衰期短，早期干预效果更好，因为白细胞的激活需要依赖高水平的抗坏血酸。在生病期间，每餐服用数克，增加摄入量对抗肠道耐受性是有帮助的。生病的时候，一整天都要服用抗坏血酸，一次摄入的量远远不够。

约瑟夫·瓦伦医生已经连续工作 270 天了。他和他的团队使用 MATH+方案，发现 95%的 Covid-19 患者都能存活。

2. 营养不是单独起作用的;测试单一营养成分效果的观察性和/或干预性研究可能会忽略最佳效益和准确评估所需的混杂因素和协同增效作用。

3. 维持血液浓度 40 - 80 ng/mL 的维生素 D 水平是优化免疫健康的一个主要部分。

   a. 维生素 D 是一种强大的激素，影响着 3000 多个基因的表达和功能，是先天和适应性免疫系统的主要组成部分。威尔·泰勒博士已经证明了其中的两个基因，TRXND1 和 GCLC，在 SARS-Cov-2 感染时成为一个重要的部位。他已经证明，病毒抑制和重要的抗氧化剂、DNA 合成调节因子、铁衰竭和内质网应激相关的基因(TXNRD1, TXNRD3, GCLC, GPX4, SELENOF, SELENOK, SELENOM, SELENOS)的表达，而维生素 D 显著上调其中两个基因:TXNRD1 和 GCLC 的表达。

   b. 对非工业化国家健康部落人口的研究表明，血液维生素 D 水平为 40 ng/mL。

   c. 1903 年，尼尔斯·里伯格·芬森(Niels Ryberg Finsen)获得了诺贝尔生理学和医学奖，“以表彰他在治疗疾病方面的贡献……通过集中光辐射，他为医学开辟了一条新途径"。

   d. 维生素 D 不足和缺乏和不断增加的心血管病的死亡、ICU 死亡和 Covid-19 死亡的风险相关。

e. 镁是维生素 D 代谢的重要辅助因子（也是生物活性 ATP 的重要辅助因子）。

f. 平衡 D3 与维生素 K2 的摄入对最佳的钙代谢和分布很重要。125-250 mcg （5,000-10,000 IU）D3 与 100 mcg K2 MK7 的比值是有益的。

g. 肾脏疾病严重损害 D3 和硒蛋白代谢。

4. 在人类生物化学中，维生素 D 和硒的联系非常紧密。

a. Schutze 博士等人在 1999 年发表的文章指出，需要足量的硒才能帮助维生素 D3 有效上调 TXNRD1 的表达。

b. 在人类，D3 和必需氨基酸硒半胱氨酸都必须有足够的量才能有效地产生几种硒蛋白。

c. 研究表明，与单独补充 D3 相比，共同补充 D3 和 L-半胱氨酸可改善 GSH、CYP24A1 和维生素 D 调节基因的状态，包括上调 PGC -1α、NRF2 和 GLUT-4 基因表达。

d. 反过来，谷胱甘肽增加了维生素 D 的循环，增强了维生素 D 的作用。

5. 维生素 D 和硒蛋白是免疫记忆细胞的形成和维持所必需的。不足不仅会增加感染性疾病的风险，也会影响对感染适应性免疫的长久益处。这也可能暗示了对疫苗接种成功的可能性。

6. 在一般人群中，硒浓度为 70 - 150 ng/mL 时可以表现出好的健康状况。血中硒蛋白 P 水平为 4.3 +/- 1.0 mg/L 时有助于 Covid-19 患者预后的改善;将 Zn 和 SELENOP 维持在参考范围内显示生存率高。

7. 微生物理论是有帮助的，但宿主体质仍然是很重要的。营养不足仍然是全球和国家公共卫生的头号敌人。

a. 宿主因素影响许多病毒的致病性。许多影响宿主的因素是可以改变的，并且与营养有关。

b. 当一些病毒在营养不良的环境中复制时，特别是在缺乏硒的环境中，它们会变异成更有害的毒株。“次级营养不良”是一个未受重视的概念。只要人们营养不良，就有可能继续出现更致命的毒株，而这又使营养不良的人面临病毒突变的风险。

c. 对抗感染会大大增加人体的代谢需求。病毒也需要营养;宿主营养和必需蛋白质的窃取和/或破坏进一步影响了人们为消除感染，恢复健康所需要的额外营养。

(Michael Passwater 是美国临床病理学协会认证的医学技术专家，免疫血液学专家，实验室管理文凭。他在临床实验室工作了 28 年，获得了特拉华大学医学技术学士学位。作为理查德·帕斯沃特（Richard Passwater）博士的儿子，他从出生前就开始服用维生素 C 和其他营养补充剂。)

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