

Physician connect

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Dear Doctor,

Greetings from Micro Labs Limited. We are happy to bring you '**Physician connect**' which contains latest and interesting news in the field of Medicine

This issue contains

- Convalescent Plasma Antibody Levels and the Risk of Death from Covid-19
- Role of Marine Omega-3 Fatty Acid and Vitamin D Supplementation on Incident Atrial Fibrillation
- Painful Nodules on the Arms

Should you require any specific article or medical information, please feel free to contact us at

medicalservices@microlabs.in

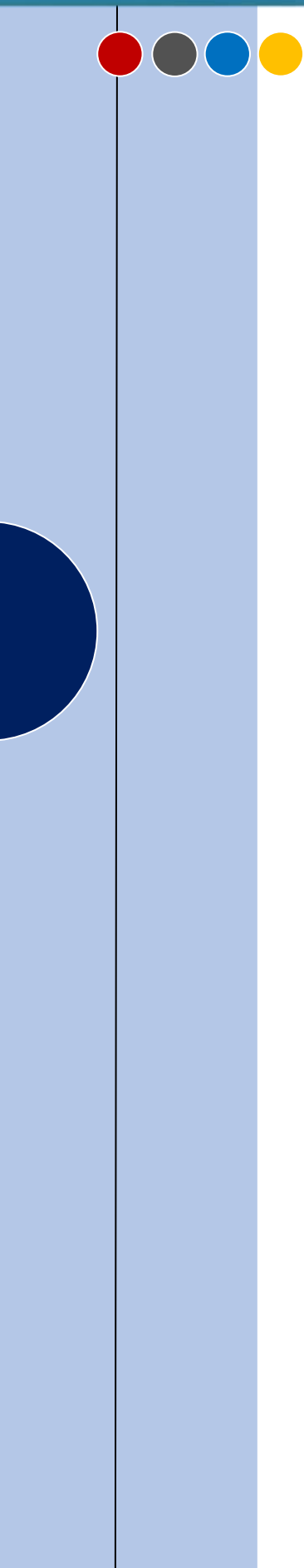
Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Limited

Convalescent Plasma Antibody Levels and the Risk of Death from Covid-19

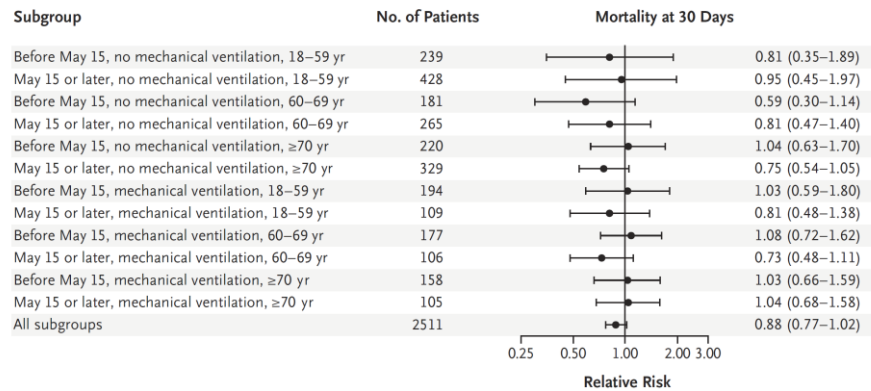
Convalescent plasma has been widely used to treat coronavirus disease 2019 (COVID-19) under the presumption that such plasma contains potentially therapeutic antibodies to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that can be passively transferred to the plasma recipient. Whether convalescent plasma with high antibody levels rather than low antibody levels is associated with a lower risk of death is unknown.



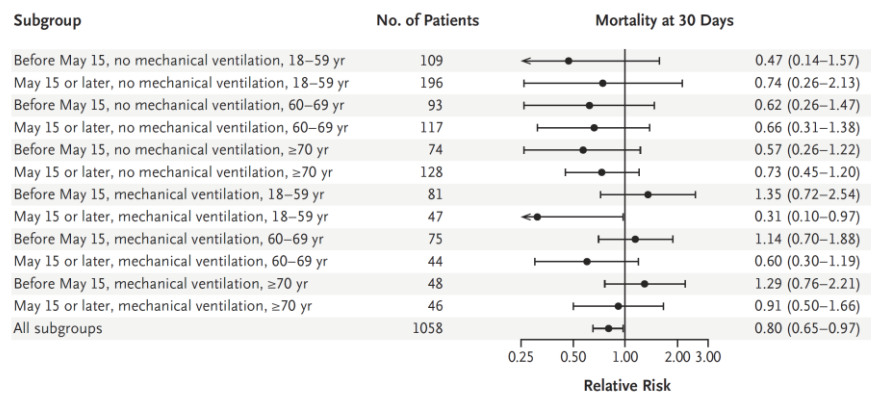
In a retrospective study based on a U.S. national registry, we determined the anti-SARS-CoV-2 IgG antibody levels in convalescent plasma used to treat hospitalized adults with Covid-19. The primary outcome was death within 30 days after plasma transfusion. Patients who were enrolled through July 4, 2020, and for whom data on anti-SARS-CoV-2 antibody levels in plasma transfusions and on 30-day mortality were available were included in the analysis.

Of the 3082 patients included in this analysis, death within 30 days after plasma transfusion occurred in 115 of 515 patients (22.3%) in the high-titer group, 549 of 2006 patients (27.4%) in the medium-titer group, and 166 of 561 patients (29.6%) in the low-titer group. The association of anti-SARS-CoV-2 antibody levels with the risk of death from Covid-19 was moderated by mechanical ventilation status. A lower risk of death within 30 days in the high-titer group than in the low-titer group was observed among patients who had not received mechanical ventilation before transfusion (relative risk, 0.66; 95% confidence interval [CI], 0.48 to 0.91), and no effect on the risk of death was observed among patients who had received mechanical ventilation (relative risk, 1.02; 95% CI, 0.78 to 1.32).

A Medium vs. Low Antibody Levels



B High vs. Low Antibody Levels

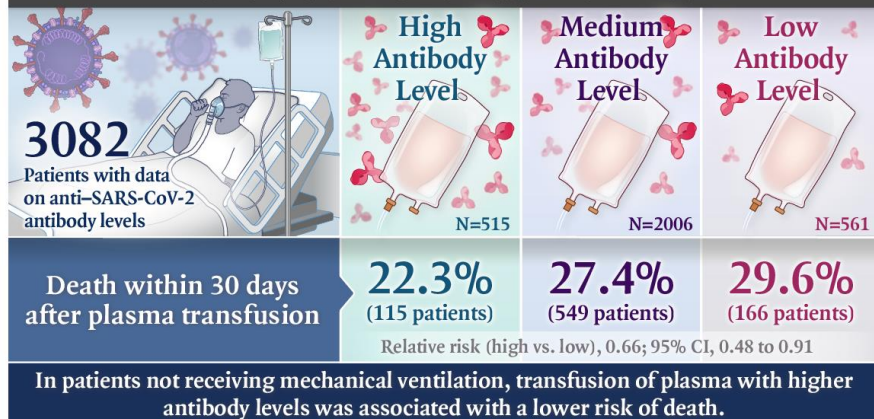


Relative Risk of Death within 30 Days after Convalescent Plasma Transfusion

The NEW ENGLAND JOURNAL of MEDICINE

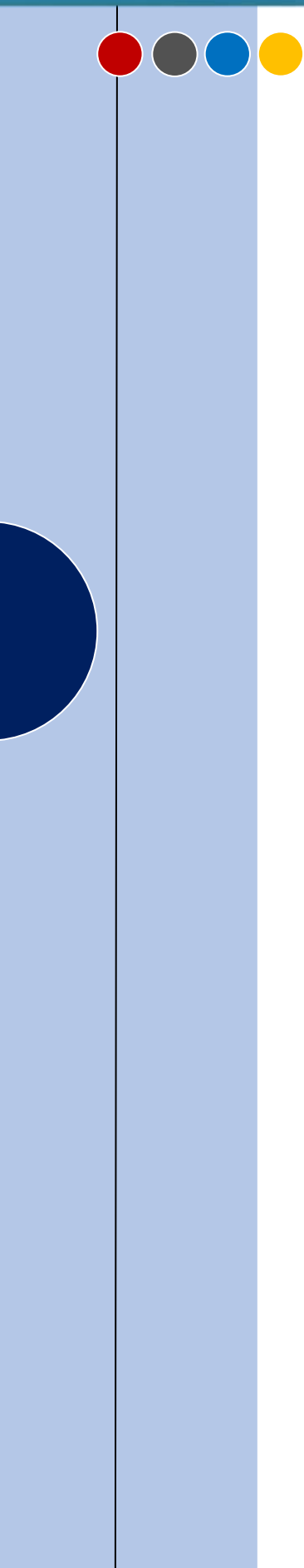
Convalescent Plasma Antibody Levels and Covid-19 Mortality

RETROSPECTIVE STUDY BASED ON A U.S. NATIONAL REGISTRY



M.J. Joyner et al. 10.1056/NEJMoa2031893

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Among patients hospitalized with Covid-19 who were not receiving mechanical ventilation, transfusion of plasma with higher anti-SARS-CoV-2 IgG antibody levels was associated with a lower risk of death than transfusion of plasma with lower antibody levels. These data show that the benefit of convalescent plasma was most apparent in patients who received plasma transfusions containing higher levels of anti-SARS-CoV-2 IgG antibodies early in the disease course.

Source: Joyner MJ et al. N Engl J Med. 2021 Mar 18;384(11):1015-1027. doi: 10.1056/NEJMoa2031893.

Role of Marine Omega-3 Fatty Acid and Vitamin D Supplementation on Incident Atrial Fibrillation

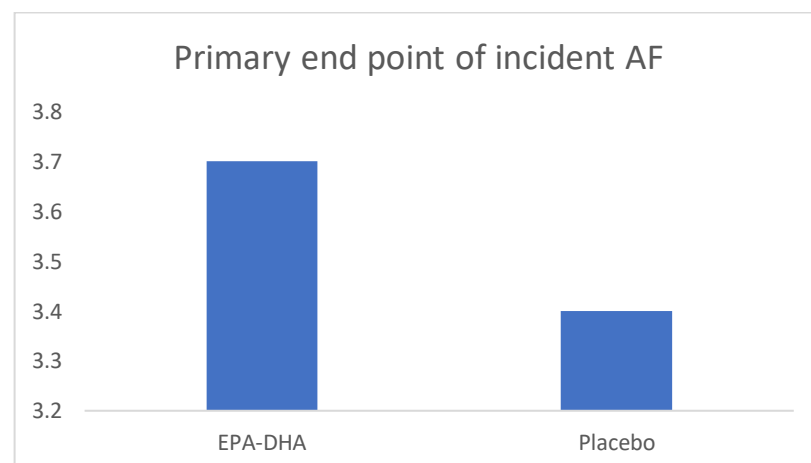
Atrial fibrillation (AF) is the most common heart rhythm disturbance, continues to increase in incidence, and results in significant morbidity and mortality. The marine omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), and vitamin D have been reported to have both benefits and risks with respect to incident AF, but large-scale, long-term randomized trial data are lacking.

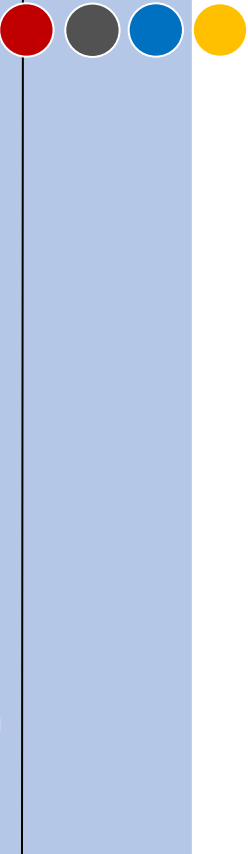
The study was conducted to test the effects of long-term administration of marine omega-3 fatty acids and vitamin D on incident AF.

An ancillary study of a 2×2 factorial randomized clinical trial involving 25 119 women and men aged 50 years or older without prior cardiovascular disease, cancer, or AF. Participants were recruited directly by mail between November 2011 and March 2014 from all 50 US states and were followed up until December 31, 2017.

Participants were randomized to receive EPA-DHA (460 mg/d of EPA and 380 mg/d of DHA) and vitamin D3 (2000 IU/d) ($n = 6272$ analyzed); EPA-DHA and placebo ($n = 6270$ analyzed); vitamin D3 and placebo ($n = 6281$ analyzed); or 2 placebos ($n = 6296$ analyzed).

Among the 25 119 participants who were randomized and included in the analysis (mean age, 66.7 years; 50.8% women), 24 127 (96.1%) completed the trial. Over a median 5.3 years of treatment and follow-up, the primary end point of incident AF occurred in 900 participants (3.6% of study population). For the EPA-DHA vs placebo comparison, incident AF events occurred in 469 (3.7%) vs 431 (3.4%) participants, respectively (hazard ratio, 1.09; 95% CI, 0.96-1.24; $P = .19$).





For the vitamin D3 vs placebo comparison, incident AF events occurred in 469 (3.7%) vs 431 (3.4%) participants, respectively (hazard ratio, 1.09; 95% CI, 0.96-1.25; $P = .19$). There was no evidence for interaction between the 2 study agents ($P = .39$).

Among adults aged 50 years or older, treatment with EPA-DHA or vitamin D3, compared with placebo, resulted in no significant difference in the risk of incident AF over a median follow-up of more than 5 years. The findings do not support the use of either agent for the primary prevention of incident AF.

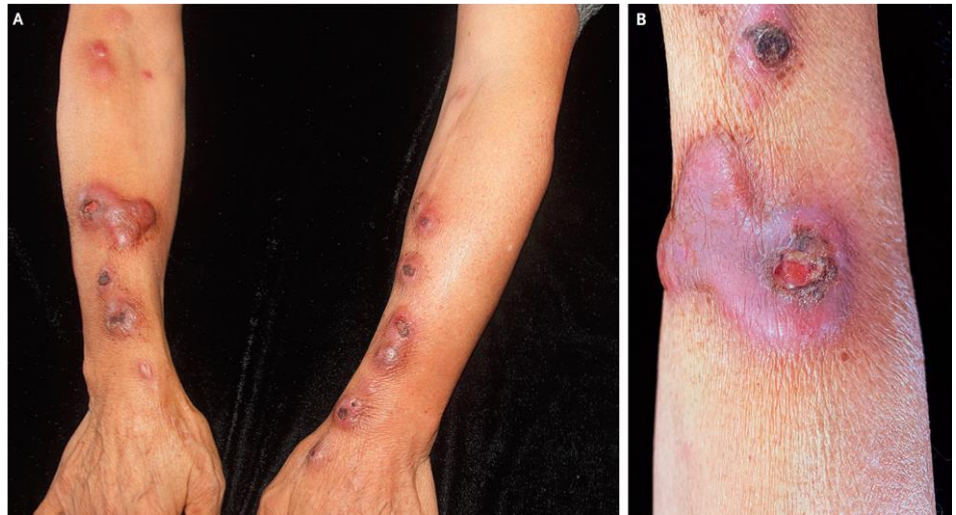
Source: Albert CM et al. JAMA. 2021 Mar 16;325(11):1061-1073. doi: 10.1001/jama.2021.1489.

Painful Nodules on the Arms

A 63-year-old woman presented to an outpatient clinic with an 8-week history of nodules on her arms. She recalled cutting her thumbs while cleaning fish that she had purchased at a seafood market in preparation for a meal, and the lesions began to develop 6 weeks later. She had no fevers.

Four weeks before presentation, she had been evaluated at another clinic, where she received treatment with itraconazole for suspected infection with *Sporothrix schenckii*; no improvement was seen. Physical examination at the current clinic revealed painful pink nodules and ulcerations with a

hemorrhagic crust on both arms (Panel A; Panel B is a close-up of the right forearm).



A biopsy specimen was obtained and revealed multiple granulomas. Cultures grew *Mycobacterium marinum*, a nontuberculous mycobacterium that is found in aquatic environments. Infections typically result from exposure to contaminated water when there are breaks in the skin. Itraconazole was stopped, and the patient received treatment with moxifloxacin, rifampin, and clarithromycin for 6 months. She had complete resolution of the infection. At a follow-up visit 1 year later, the nodules had resolved but scarring remained.

Source: Su Q, Wang F. Painful Nodules on the Arms. *N Engl J Med*. 2021 Mar 18;384(11):e41. doi: 10.1056/NEJMicm2028530.



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