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ECR: Don't fear lymphadenopathy after vaccination

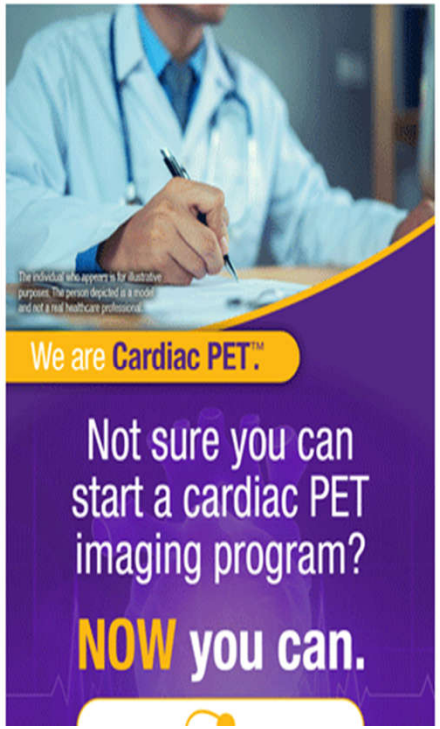
By Amerigo Allegretto, AuntMinnie.com staff writer

July 15, 2022 -- Researchers continue to gain ground in understanding lymphadenopathy caused by the COVID-19 vaccines, and several presenters discussed their findings on the topic on July 13 at ECR 2022.

Three presentations given at the event looked at lymphadenopathy persistence and characteristics, as well as differences in reaction between mRNA and viral vector vaccines.

"Initial clinical management was based on previous experience with other vaccinations, but no strong data was available at the time," said Dr. Yael Adler-Levy from the Hadassah Hebrew University Medical Center in Jerusalem. "With worldwide vaccination implementation, more data has accumulated."

The first COVID-19 vaccines began to be rolled out in late 2020. Since then, various side effects from vaccination have been reported, one of them being the swelling of



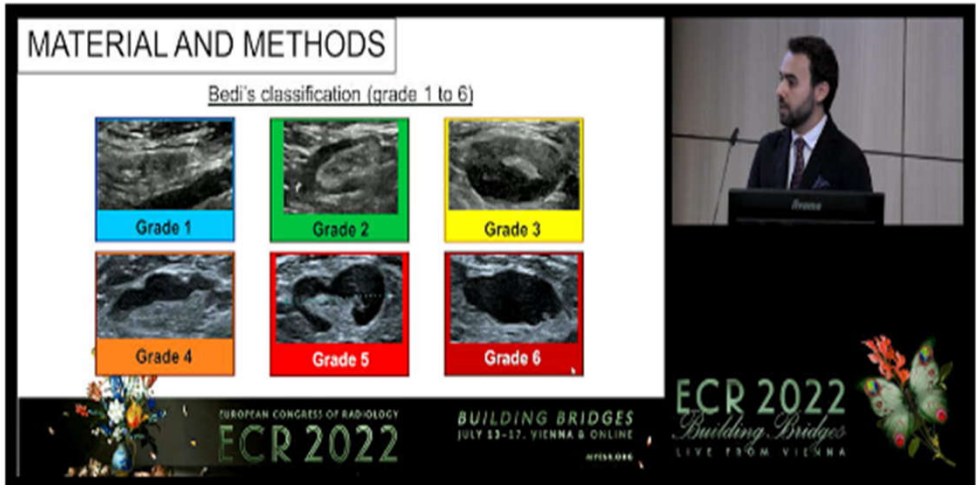
Previous guidelines suggested delaying breast cancer screening if lymphadenopathy occurred, but research suggests that swollen glands can persist up to 12 weeks.

In her presentation, Adler-Levy showed the results of her team's study, which looked at 41 people. The team's goal was to define a timeline to expect lymphadenopathy resolution following vaccination, as well as aid guidelines on deciding to go through with full diagnostic workup.

The researchers found that at six weeks, 52% of the women included in the study achieved resolution. About 30% of the women saw lymphadenopathy persist for more than nine weeks. Biopsies that were performed in cases persisting beyond 12 weeks were found to be all benign, with resolution by the 21-week mark.

"Our data supports current guidelines in preferring follow-up over biopsy as a management option and propose extending the follow-up period," Adler-Levy said. "We recommend deferring biopsy beyond 12 weeks of initial detection."

Another presentation led by Dr. Ignacio Soriano Aguadero from the Navarra University Clinic in Spain showed data that sought to compare the axillary lymph node reaction to COVID vaccination between mRNA and viral vector vaccines.



Aguadero's team looked at data from 223 people who were given three rounds of ultrasound. This included baseline (before vaccination), first follow-up one week after first vaccination dose, and second follow-up after second vaccination dose.

Out of the total, 146 (66%) of participants received an mRNA vaccine, while the remaining 77 had a viral vector vaccine (AstraZeneca). The team reported significant differences in lymph node characteristics between the two groups.

Swollen lymph node characteristics in patients who received mRNA and viral vector COVID-19 vaccines

	mRNA	Viral vector	p-values
Average number of lymph nodes	6.38	4.26	< 0.001
Diameter (mm)	23.46	20.58	0.001
Cortical thickness (mm)	4.81	2.92	< 0.001

The group also found a higher frequency of grades four through six on the Bedi classification scale in the mRNA group (61/146) compared with the viral vector group (9/77).

"It seems that these [differences] are related to the way the vaccines act in the axillary lymph nodes and how they're presented to the antibodies," Aguadero said. "We are continuing work."

In another presentation given at the session, Dr. Carola Catanese from the Imaging Institute of Italian Switzerland talked about her team's study that looked at prevalence and time regression of vaccine-related axillary lymphadenopathy in

Cardiometabolic outcomes up to 12 months after COVID-19 infection. A matched cohort study in the UK

Emma Rezel-Potts, Abdel Douiri, Xiaohui Sun, Phillip J. Chowienczyk, Ajay M. Shah, Martin C. Gulliford

Published: July 19, 2022 • https://doi.org/10.1371/journal.pmed.1004052

Abstract

Background

Acute Coronavirus Disease 2019 (COVID-19) has been associated with new-onset cardiovascular disease (CVD) and diabetes mellitus (DM), but it is not known whether COVID-19 has long-term impacts on cardiometabolic outcomes. This study aimed to determine whether the incidence of new DM and CVDs are increased over 12 months after COVID-19 compared with matched controls.

Methods and findings

Methods and findings

We conducted a cohort study from 2020 to 2021 analysing electronic records for 1,356 United Kingdom family practices with a population of 13.4 million. Participants were 428,650 COVID-19 patients without DM or CVD who were individually matched with 428,650 control patients on age, sex, and family practice and followed up to January 2022. Outcomes were incidence of DM and CVD. A difference-in-difference analysis estimated the net effect of COVID-19 allowing for baseline differences, age, ethnicity, smoking, body mass index (BMI), systolic blood pressure, Charlson score, index month, and matched set. Follow-up time was divided into 4 weeks from index date ("acute COVID-19"), 5 to 12 weeks from index date ("post-acute COVID-19"), and 13 to 52 weeks from index date ("long COVID-19"). Net incidence of DM increased in the first 4 weeks after COVID-19 (adjusted rate ratio, RR 1.81, 95% confidence interval (CI) 1.51 to 2.19) and remained elevated from 5 to 12 weeks (RR 1.27, 1.11 to 1.46) but not from 13 to 52 weeks overall (1.07, 0.99 to 1.16). Acute COVID-19 was associated with net increased CVD incidence (5.82, 4.82 to 7.03) including pulmonary embolism (RR 11.51, 7.07 to 18.73), atrial arrythmias (6.44, 4.17 to 9.96), and venous thromboses (5.43, 3.27 to 9.01). CVD incidence declined from 5 to 12 weeks (RR 1.49, 1.28 to 1.73) and showed a net decrease from 13 to 52 weeks (0.80, 0.73 to 0.88). The analyses were based on health records data and participants' exposure and outcome status might have been misclassified.

Conclusions

In this study, we found that CVD was increased early after COVID-19 mainly from pulmonary embolism, atrial arrhythmias, and venous thromboses. DM incidence remained elevated for at least 12 weeks following COVID-19 before declining. People without preexisting CVD or DM who suffer from COVID-19 do not appear to have a long-term increase in incidence of these conditions.

New Research Shows Vitamin D Deficiency Leads to Dementia

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By UNIVERSITY OF SOUTH AUSTRALIA JUNE 15, 2022

Background

Higher vitamin D status has been suggested to have beneficial effects on the brain.

Objectives

To investigate the association between 25-hydroxyvitamin D [25(OH)D], neuroimaging features, and the risk of dementia and stroke.

Methods

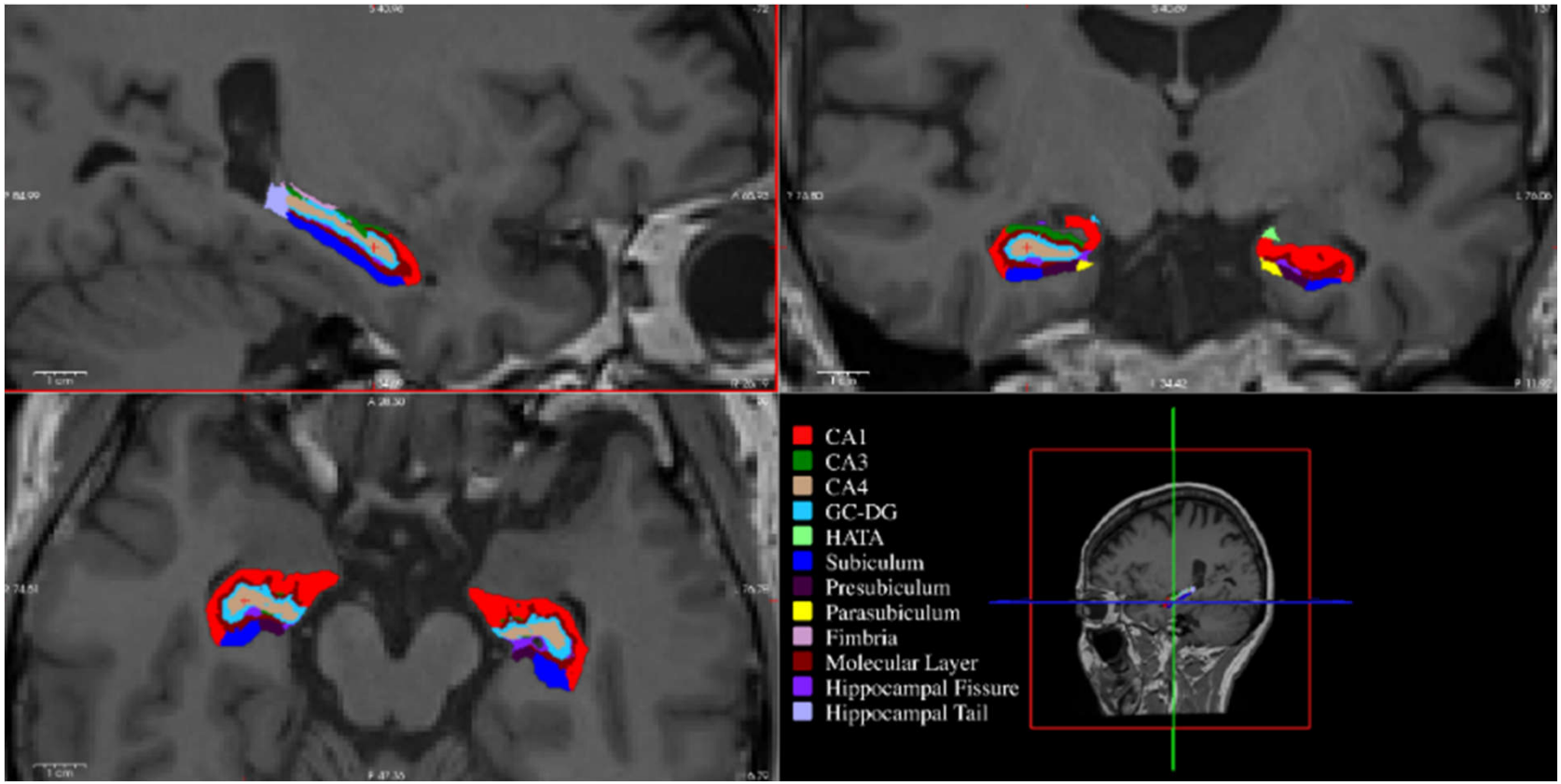
We used prospective data from the UK Biobank (37–73 y at baseline) to examine the association between 25(OH)D concentrations with neuroimaging outcomes (N = 33,523) and the risk of dementia and stroke (N = 427,690; 3414 and 5339 incident cases, respectively). Observational analyses were adjusted for age, sex, ethnicity, month, center, and socioeconomic, lifestyle, sun behavior, and illness-related factors. Nonlinear Mendelian randomization (MR) analyses were used to test for underlying causality for neuroimaging outcomes (N = 23,901) and dementia and stroke (N = 294,514; 2399 and 3760 cases, respectively).

Results

Associations between 25(OH)D and total, gray matter, white matter, and hippocampal volumes were nonlinear, with lower volumes both for low and high concentrations (adjusted *P*-nonlinear ≤ 0.04). 25(OH)D had an inverse association with white matter hyperintensity volume [per 10 nmol/L 25(OH)D; adjusted β: −6.1; 95% CI: −11.5, −7.0]. Vitamin D deficiency was associated with an increased risk of dementia and stroke, with the strongest associations for those with 25(OH)D <25 nmol/L (compared with 50–75.9 nmol/L; adjusted HR: 1.79; 95% CI: 1.57, 2.04 and HR: 1.40; 95% CI: 1.26, 1.56, respectively). Nonlinear MR analyses confirmed the threshold effect of 25(OH)D on dementia, with the risk predicted to be 54% (95% CI: 1.21, 1.96) higher for participants at 25 nmol/L compared with 50 nmol/L. 25(OH)D was not associated with neuroimaging outcomes or the risk of stroke in MR analyses. Potential impact fraction suggests 17% (95% CI: 7.22, 30.58) of dementia could be prevented by increasing 25(OH)D to 50 nmol/L.

Conclusions

Low vitamin D status was associated with neuroimaging outcomes and the risks of dementia and stroke even after extensive covariate adjustment. MR analyses support a causal effect of vitamin D deficiency on dementia but not on stroke risk.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CA3
CA4
GC-DG
HATA
Subiculum
Presubiculum
Parasubiculum
Fimbria
Molecular Layer
Hippocampal Fissure
Hippocampal Tail

Flu Vaccination Linked to 40% Reduced Risk of Alzheimer's Disease

Featured Neurology Neuroscience · June 26, 2022

Summary: *Older adults who received at least one flu vaccination were 40% less likely to develop Alzheimer's disease over the course of a four-year follow-up than their peers who did not receive a vaccine.*

Source: *UT Houston*

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July 21, 2022

Comparison of Outcomes of Ischemic Stroke Initially Imaged With Cranial Computed Tomography Alone vs Computed Tomography Plus Magnetic Resonance Imaging

Heitor Cabral Frade, MD[1]; Susan E. Wilson, DNP[2]; Anne Beckwith, BS[2]; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2022;5(7):e2219416. doi:10.1001/jamanetworkopen.2022.19416

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discharge.

Results Among 246 participants, the median age was 68 years (IQR, 58-78.8 years) and 131 (53.0%) were men. Death or dependence at discharge occurred more often in patients with additional MRI (59 of 123 [48.0%]) than in those with CT alone (52 of 123 [42.3%]; absolute difference, 5.7%; 95% CI, −6.7% to 18.1%), meeting the −7.50% criterion for noninferiority. Stroke or death within 1 year after discharge determined for 225 of 235 (96%) survivors occurred more often in patients with additional MRI (22 of 113 [19.5%]) than in those with CT alone (14 of 112 [12.5%]; relative risk, 1.14; 95% CI, 0.86-1.50), meeting the 0.725 relative risk criterion for noninferiority.

Conclusions and Relevance This propensity score–matched cohort study of patients hospitalized with acute ischemic stroke found that a diagnostic imaging strategy of initial CT alone was noninferior to initial CT plus additional MRI with regard to clinical outcomes at discharge and at 1 year. Further research is needed to determine which patients hospitalized with acute ischemic stroke benefit from MRI.

Impact of imaging protocols on clinical outcomes of stroke patients

Outcome	CT plus MRI	CT alone
Dependence or death at hospital discharge	48%	42.3%
Stroke or death at 1 year postadmission	19.5%	12.5%
Death during hospitalization	5.7%	3.3%

Differences are not statistically significant.

Stroke

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RESEARCH ARTICLE

Laparoscopically Confirmed Endometriosis and Risk of Incident Stroke: A Prospective Cohort Study

Leslie V. Farland, William J. Degnan III, Melanie L. Bell, Scott E. Kasner, Ava L. Liberman, Divya K. Shah, Kathryn M. Rexrode and Stacey A. Missmer

Originally published 21 Jul 2022 | https://doi.org/10.1161/STROKEAHA.122.039250 | Stroke. 2022;0:10.1161/STROKEAHA.122.039250

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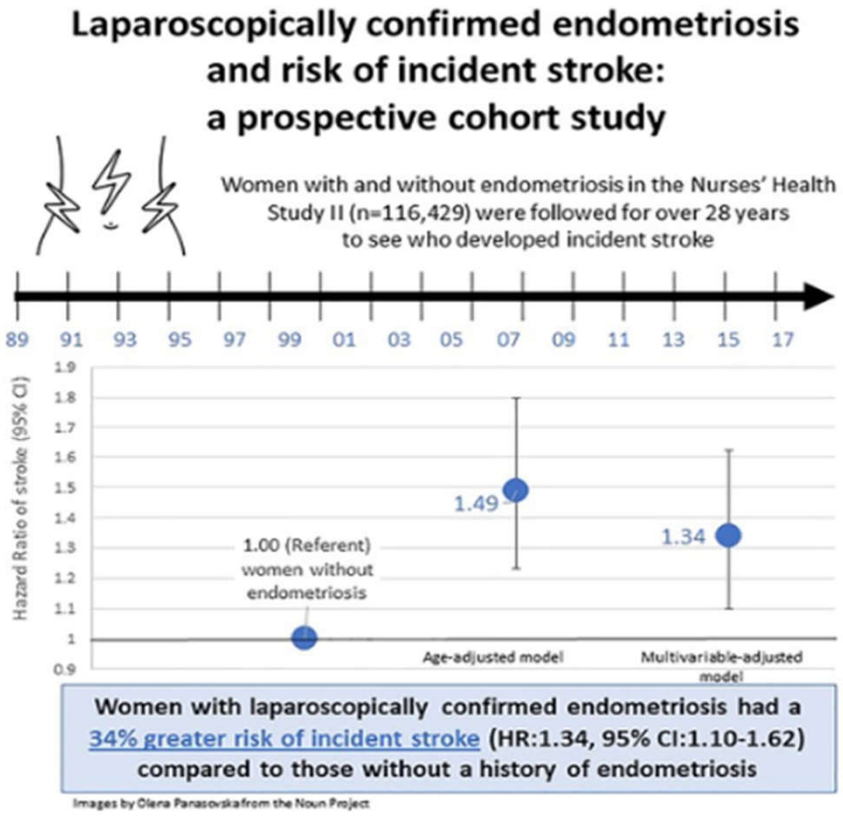
Conclusions:

We observed that women with endometriosis were at elevated risk of stroke. Women and their health care providers should be aware of endometriosis history, maximize primary cardiovascular prevention, and discuss signs and symptoms of cardiovascular disease.



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Keywords

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