

- **Cerebral venous thrombosis after vaccination against COVID-19 in the UK: a multicentre cohort study** (Richard Perry *et al.*)
- Study conceived in March 2021 when we first saw cases of severe blood clots in veins after AstraZeneca vaccine (typically 7-10 days later)
- Novel condition defined by “thrombocytopenia” i.e. blood contains abnormally low level of “platelets” (cell fragments needed for clotting)
- Named “VITT” (vaccine-induced immune thrombotic thrombocytopenia)
- Commonest manifestation is blockage of veins (and venous sinuses) draining blood from the brain = “cerebral venous thrombosis” (CVT)

- 95 cases of CVT from 43 UK hospitals
- VITT defined as low platelets and, if measured, high “D-dimers” (a marker of abnormal clotting known to be high in VITT)
- 70 satisfied the criteria for VITT
- 25 post-vaccine but non-VITT (vaccine assumed to be coincidental)
- VITT group were different to non-VITT group:
 - younger (47 years vs 57 years)
 - multiple bleeds in the brain more common
 - more veins in the head blocked
 - often veins elsewhere in the body blocked

CAIAC Study: Outcomes & Conclusion

- VITT-associated CVT is severe with 47% of VITT patients dead or dependent on others for their care at the end of admission
- Compared with only 16% non-VITT patients dead or dependent (similar to outcome in previous studies of CVT)
- The following treatments were associated with a better outcome:
 - Non-heparin anticoagulants
 - Intravenous immunoglobulin
- VITT is a severe condition – but may be treatable & fortunately very rare