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BENEFITS VERSUS RISKS

VACCINE-INDUCED IMMUNE THROMBOTIC THROMBOCYTOPENIA

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INTRODUCTION

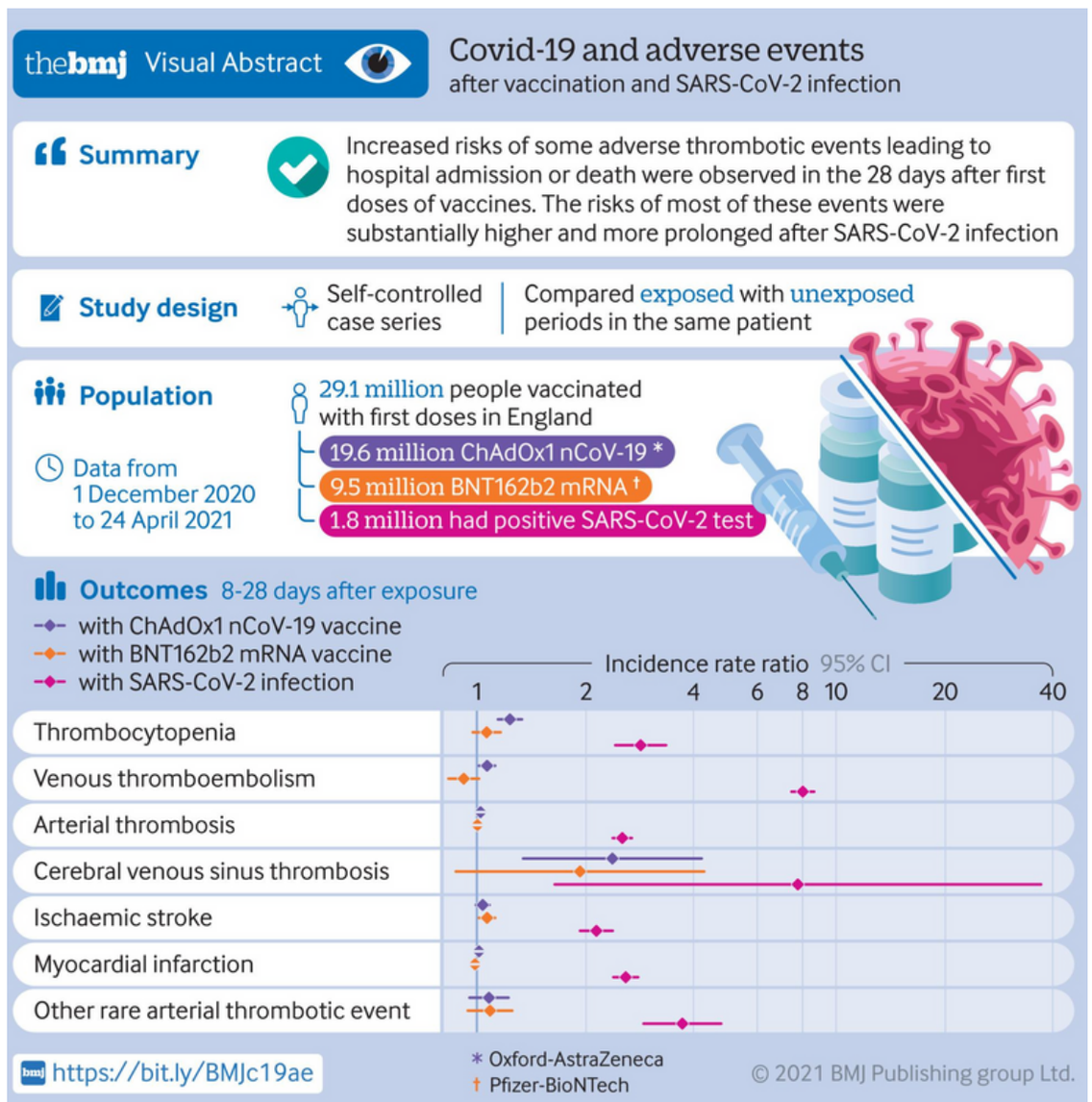
Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT) following COVID-19 vaccination was first highlighted in April 2021 by United States Food & Drug Administration (FDA) and the Centers for Disease Control & Prevention (CDC). Following reported cases post administration of AstraZeneca and Johnson & Johnson vaccines. Until 13th September 2021, Ministry of Health (MOH) reported 21,372,278 of Malaysian population has received at least 1 dose of COVID vaccination with 1,709,782 (8%) receiving AstraZeneca vaccine.

CASE REPORT

A 30 years old gentleman with no previous comorbidities presented with 8 days history of persistent bifrontal headache which started 5 days following his first dose of AstraZeneca vaccination. It wasn't relieved by painkillers and worsens over the last 3 days, associated with persistent episodes of vomiting. Otherwise, no initial symptoms of visual disturbance, chest pain, shortness of breath or limbs affected.

Initial blood results revealed low level of Platelet and Fibrinogen with Positive D-Dimer test which together with the presenting symptoms and history fulfills the diagnostic screening of VITT. CTA Brain reported filling defect in superior sagittal sinus with corresponding dense clot and VITT diagnosis was established.

The patient was started on anticoagulant and immunosuppressant therapy per protocol. He was discharged well 7 days after hospitalization and planned for Covid-19 Pfizer vaccination for his second dose.



DISCUSSION & CONCLUSION

In Malaysia, rate of adverse event post AstraZeneca vaccine is 0.53 per 1,000 doses. Only 0.04 per 1,000 doses were categorised as serious effect with no vaccination related death reported so far. Breakthrough death was reported at 0.0012% in a fully vaccinated individuals and 0.028% in partially vaccinated individuals, resulting in effectiveness rate of 99.42% and 75.9% respectively. Recommendations for targeted administration toward older population and stringent inclusion criteria especially in groups with previous history of thrombocytopenia or autoimmune disorder may further reduce incident of adverse event following AstraZeneca vaccination.

The FDA, CDC and MOH is continuously monitoring the safety of COVID-19 vaccines, with benefits and possible risks remain under review. The expected benefits of vaccines in preventing COVID-19 and its complications far outweigh currently known side effects. On the basis of this ongoing review, the global advice remains that the benefits of vaccine outweigh the risks in majority of people.

Acknowledgement & Declaration
The authors whose names are listed would like to acknowledge all parties involved and declare that there are none conflict of interest.

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