## Argatroban/immunostimulants

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### Vaccine-induced immune thrombotic thrombopenia and lack of efficacy: 3 case reports

In a study, three females, aged 44-50 years were described, who developed vaccine-induced immune thrombotic thrombopenia (ViTT) following vaccination with AZD-1222 or Ad26.COV2.S vaccine for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Additionally, they exhibited lack of efficacy during treatment with immune-globulin and argatroban for ViTT [*not all dosages and routes stated; time to reaction onset not clearly stated*].

This report describes a 47-year-old woman (Case 1): The woman presented reporting progressive headaches for seven days after the first dose of AZD-1222 [ChAdOx1 nCoV-19] vaccine for SARS-CoV-2. Within a few hours, she developed rapid neurological deterioration. Head CT scan images and venograms demonstrated large-scale cerebral sinus and vein thrombosis (CVT) and intracerebral hemorrhage (ICH). Emergency surgical interventions were required due to clinical signs of herniation and was hospitalised. On admission, findings of laboratory investigations demonstrated substantial thrombocytopenia with a platelet count of 9G/L respectively. Subsequently, a diagnosis of vaccine-induced immune thrombotic thrombopenia was made. The woman was treated with unspecified IV immune-globulin [immunoglobulin] 1g/kg and unspecified corticosteroids, perioperative platelets. However, intraoperative bleeding and venous statis was noted, and required immaculate hemostasis. The intraoperative bleeding was controlled by artificial haemostyptics and transfusions. Further, postoperative care was carried out in neuro-(ICU). Argatroban was initiated for anticoagulation, however; progression of ICH and brain damage was observed (lack of efficacy). Subsequently, she died due to extensive cranial injury.

This report describes a 50-year-old woman (Case 2): The woman presented reporting progressive headaches for ten days after the first dose of AZD-1222 [ChAdOx1 nCoV-19] vaccine for SARS-CoV-2. Within a few hours, she developed rapid neurological deterioration. Head CT scan images and venograms demonstrated large-scale cerebral sinus and vein thrombosis (CVT) and intracerebral hemorrhage (ICH). Emergency surgical interventions were required due to clinical signs of herniation and was hospitalised. On admission, findings of laboratory investigations demonstrated substantial thrombocytopenia with a platelet count of 24G/L respectively. Subsequently, a diagnosis of vaccine-induced immune thrombotic thrombopenia was made. The woman was treated with IV immune-globulin [immunoglobulin] 1g/kg and unspecified corticosteroids and perioperative platelets. However, intraoperative bleeding and venous statis was noted, and she required immaculate haemostasis. The intraoperative bleeding was controlled by artificial haemostyptics and transfusions. Further, postoperative care was carried out in neuro-(ICU). Argatroban was initiated for anticoagulation, however; progression of ICH and brain damage was observed (lack of efficacy). Subsequently, she died due to extensive cranial injury.

This report describes a 44-year-old woman (Case 3): presented reporting progressive headaches for twelve days after the first dose of Ad26.COV2-S vaccine for SARS-CoV-2. Within a few hours, she developed rapid neurological deterioration. A head CT scan imaging and venogram demonstrated large-scale cerebral sinus and vein thrombosis (CVT) and intracerebral hemorrhage (ICH). An emergency surgical intervention was require due to clinical signs of herniation and was hospitalised. On admission, findings of laboratory investigations demonstrated substantial thrombocytopenia with a platelet count of 48G/L. Subsequently, a diagnosis of vaccine-induced immune thrombotic thrombopenia was made. The woman was treated with unspecified IV immune-globulin [immunoglobulin] and unspecified corticosteroids, perioperative platelets. However; intraoperative bleeding and venous statis was noted, and required immaculate hemostasis. The intraoperative bleeding was controlled by artificial haemostyptics and transfusions. Further, postoperative care was carried out in neuro-(ICU). Argatroban was initiated for anticoagulation, however; progression of ICH and brain damage was observed. Subsequently, she died due to extensive cranial injury (lack of efficacy).

Gessler F, et al. Neurosurgical considerations regarding decompressive craniectomy for intracerebral hemorrhage after sars-cov-2-vaccination in vaccine induced thrombotic thrombocytopenia-vitt. Journal of Clinical Medicine 10: 2777, No. 13, Jul 2021. Available from: URL: http://doi.org/10.3390/jcm10132777 803613978