
# Vaccine Induced Thrombocytopenia & Thrombosis (VITT) – The UHS response for patient care

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# Something Interesting

- Pathology at UHS won the chairman's outstanding team award – hospital super heroes


Saved countless lives

Hospital couldn't have functioned without them

Dogged determination

Outstanding innovation

Tx examples:

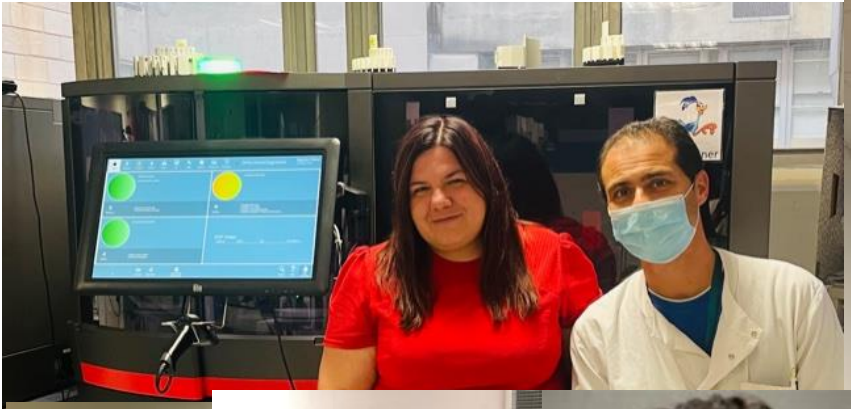
Setting up tx at the private hospital enabling transplantation to continue

Electronic prescribing

VITT pathway

# The UHS Transfusion Team

- Consultant Haematologist: Dr Sara Boyce
- TLM: Kerry Dowling (chair of UKTLC & deputy chair of NTLM)
- TPs: Jon Ricks (lead), Diana Agacy, Sam Carrington
- Senior BMS: Tracey Lofting, Kate Priest, Sarah Mumford, Angelika Themessl, Pippa Downey, Joy Johnson
- 24 BMS, 15 APs, 5 MLAs



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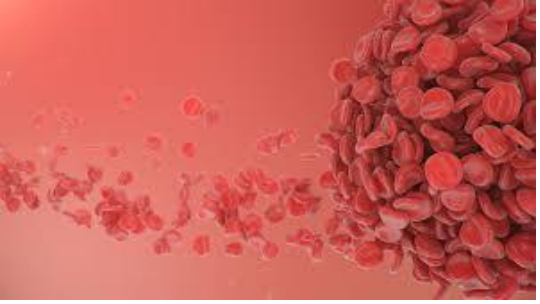
# Vaccine Induced Thrombocytopenia & Thrombosis (VITT)

- March 21 - Concerns about unusual thrombotic events following AZ vaccine
- Thrombosis at unusual sites (cerebral venus sinus)
- Thrombocytopenia, ^ D-Dimer, decreased fibrinogen
- Fit and healthy, young individuals
- 5-24 days post AZ vaccine
- PF4 antibodies by ELISA
- Treatment anticoagulation & IvIg +/- steroid. Plasma exchange for more severe disease



# The call to action

- Patient 1 -18.03.21 - 26 year old female – cerebral sinus vein thrombosis and thrombocytopenia. AZ 06.03.21 – headache, photophobia, nausea
- 24.03.21 – 70 year old female – vein thromboses, PE, thrombocytopenia 2 weeks post AZ
- 07.04.21 – 29 year old female – headache, confusion, seizures – 10 days post AZ – cerebral venous sinus thrombosis – required intubation
- 09.05.21 – 45 year old female – 14 days post AZ – venous sinus thrombosis

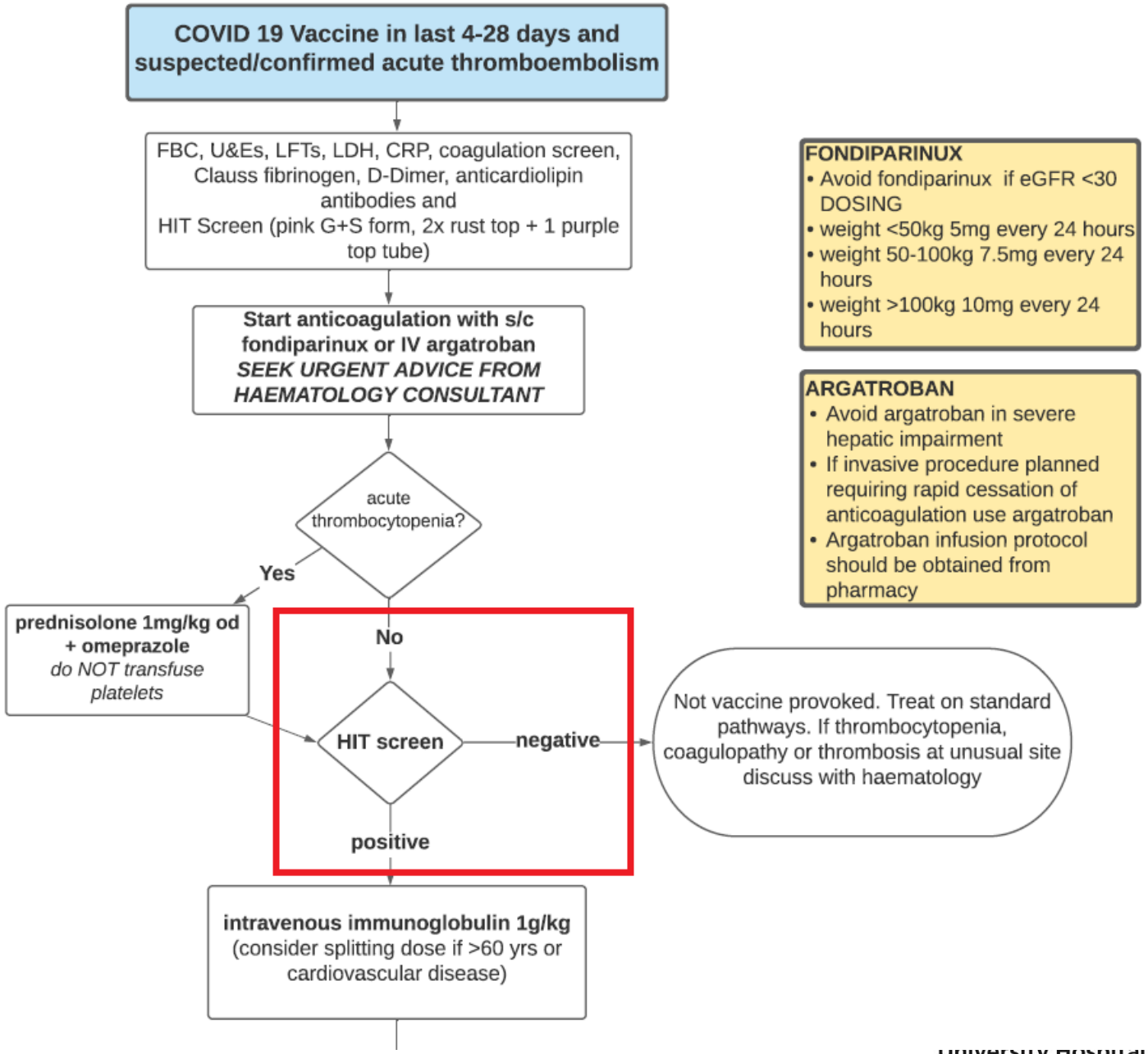

# What was needed

- Fast clinical review and differential diagnosis for treatment decisions
- Detection of anti-PF4 antibodies by approved ELISA technique (HT ab to PF4 in the serum that activates plts, absence of heparin treatment)

  (some methods gave negative results)
- Help for EDs becoming overwhelmed with patients with headache post vaccine

# What did the lab do?

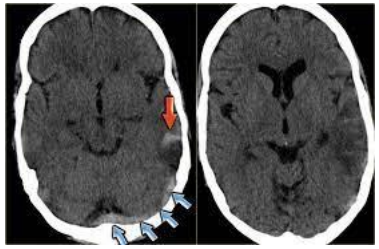
- Already running validated method for HIT screen (3 hour TAT, 9-5 mon-fri)
- Increased service provision within days of patient 1 - 7 day service 8-8
- Voluntary roster covered by senior staff
- Working together – offered to neighbouring hospitals
- Took part in a regional work piece led by CCGs to produce a pathway to ease pressure on ED, but provide urgent decision making


COVID 19 Vaccine in last 4-28 days and suspected/confirmed acute thromboembolism
FBC, U&Es, LFTs, LDH, CRP, coagulation screen, Clauss fibrinogen, D-Dimer, anticardiolipin antibodies and HIT Screen (pink G+S form, 2x rust top + 1 purple top tube)
Start anticoagulation with s/c fondiparinux or IV argatroban SEEK URGENT ADVICE FROM HAEMATOLOGY CONSULTANT
acute thrombocytopenia?
Yes
prednisolone 1mg/kg od + omeprazole do NOT transfuse platelets
No
HIT screen
negative
Not vaccine provoked. Treat on standard pathways. If thrombocytopenia, coagulopathy or thrombosis at unusual site discuss with haematology
positive
intravenous immunoglobulin 1g/kg (consider splitting dose if >60 yrs or cardiovascular disease)
FONDIPARINUX
• Avoid fondiparinux if eGFR <30 DOSING
• weight <50kg 5mg every 24 hours
• weight 50-100kg 7.5mg every 24 hours
• weight >100kg 10mg every 24 hours
ARGATROBAN
• Avoid argatroban in severe hepatic impairment
• If invasive procedure planned requiring rapid cessation of anticoagulation use argatroban
• Argatroban infusion protocol should be obtained from pharmacy

# Take home facts

(Pavord et al N Engl J Med 2021; 385:1680-1689)

- As of 06.06.21
- 8 million first doses of vaccine to patients <50
- 220 cases VITT with 49 deaths
- 85% <60 years old



- Rare but devastating complication – extensive thrombotic events
- Low plt, fibrinogen + ^DD associated with worse outcome
- Context: 141k UK COVID-19 deaths