THE SOCIETY FOR
VASCULAR TECHNOLOGY OF
GREAT BRITAIN AND IRELAND

NEWSLETTER Issue 113 Summer 2021

In this Issue:

Welcome to the Summer 2021 SVT Newsletter

In this edition you will find an interesting case study of Takayasu arteritis, a helpful reminder on probe decontamination, details of the 2021 SVT ASM and a call for a willing volunteer to take part in a live debate at the ASM!

The link to the newly updated PPG produced by the Professional Standards Committee is also available, along with details of an upcoming webinar featuring vascular lectures from the Austalasian Sonographers Association hosted by BMUS, CPD questions updates and news of a new You Tube channel launched by AXREM.

Reminder there is still time to give your support to the SVT President, Lee Smith and Vice President, Emma Waldegrave who will be embarking on a 185-mile cycle challenge through the Outer Hebrides Islands in a bid to raise much-needed awareness and funding for the Circulation Foundation.

The newsletter is continually looking for original contributions, so please email me any case studies, reviews, your experiences or any comments that you think would be of interest to members of the society. I would also welcome any comments on articles published in this edition.

As always a £25 prize is offered to the individual chosen for sending in the best article or letter each quarter.

The next newsletter will be the Autumn 2021 Issue, The closing date for receiving submissions will be Friday October 8th 2021.

Daniela Bond-Collins

SVT Newsletter Editor

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Presenting Symptoms

A 65yr old female, non-smoker, presented to her GP eight weeks post colonic resection for colon cancer, with a two-week history of intermittent left arm pain radiating from the shoulder to the fingertips worsening upon exercise e.g., carrying, lifting with left arm. The patient had no previous history of PAD.

The clinical examination on the left arm demonstrated normal range of movement with no associated pain on palpation or movement. and very faint Brachial and Radial pulses with a cold left hand.

The patient's recent blood work showed raised inflammatory markers:

- CRP 77 (Normal range <10mg/L) and ESR 97 mm/hr. (normal range women 0-29 mm/hr.).

The GP referred the patient to the Vascular triage clinic at the John Radcliffe hospital where the patient was assessed by the Specialist Vascular Registrar who in turn referred the patient to the Vascular Studies unit for arterial duplex scan.

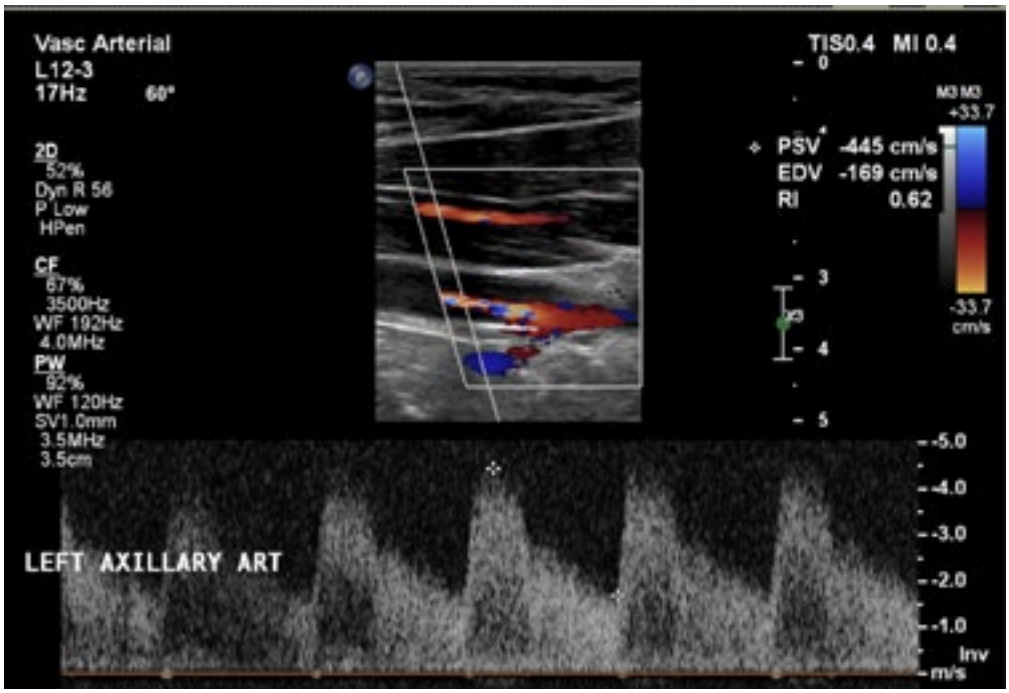

Fig 1. Left Axillary artery showed diffuse circumferential lightly echogenic disease causing a severe string like stenosis >90% stenosis (PSVR >6) PSV/EDV = 445/169cm/sec. Stenosis length was approx. 5cm long.

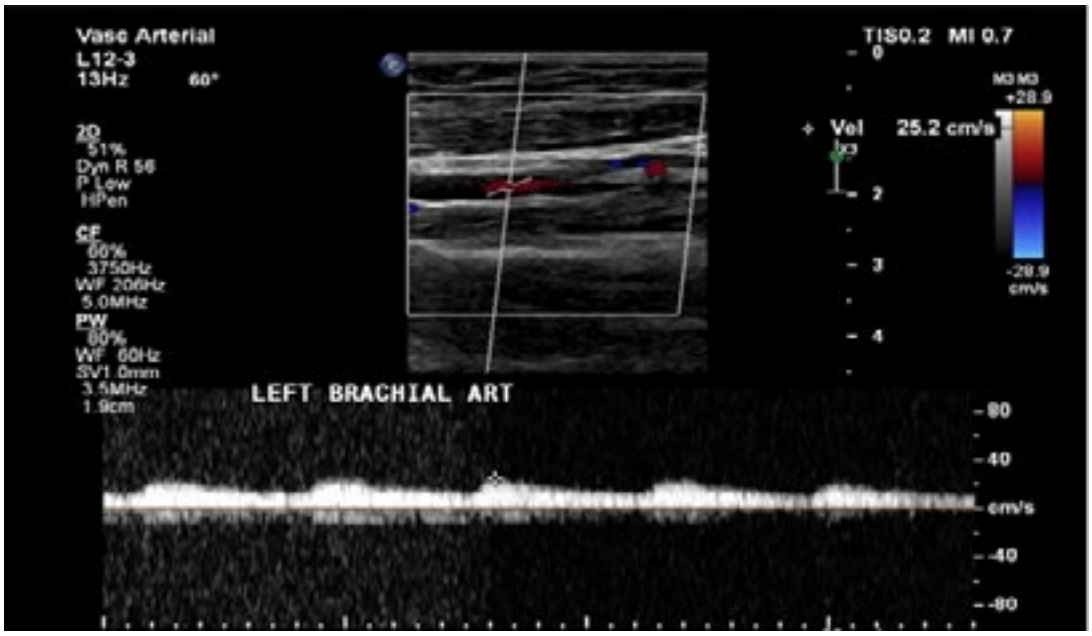

Fig 2. Left Brachial Artery is patent with damped monophasic tardus-parvus waveform – PSV 25cm/sec.

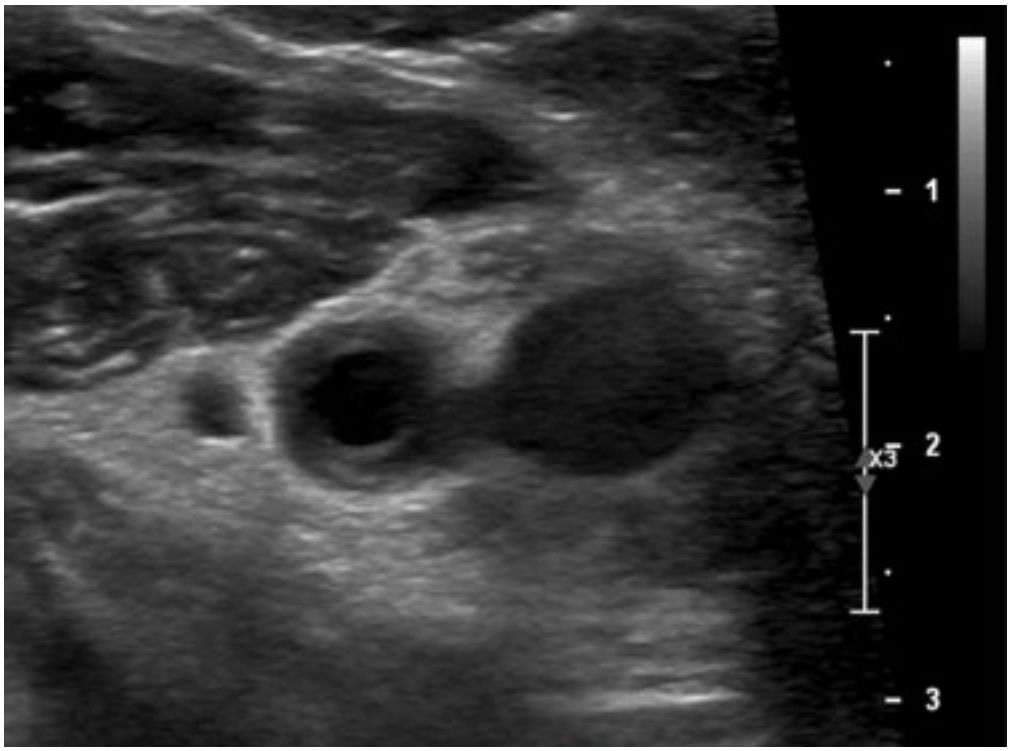

Fig 3. Right Axillary artery shows diffuse light echogenic disease circumferentially narrowing the lumen of the vessel causing a >75% stenosis.

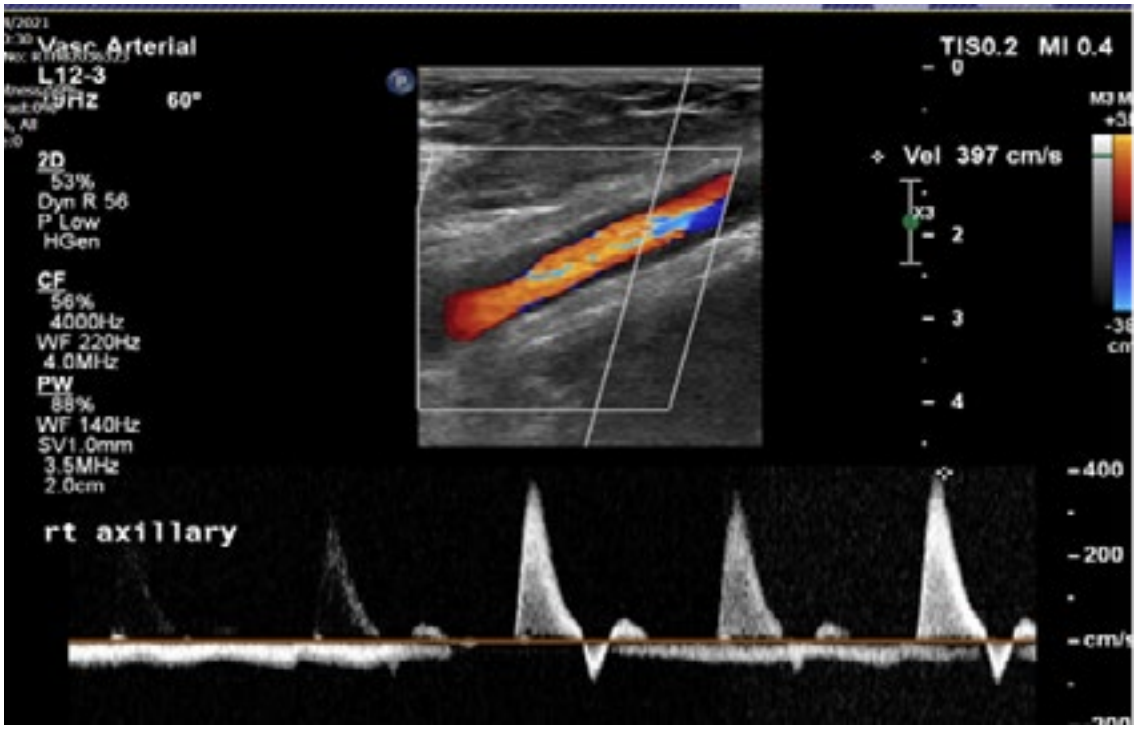

Fig 4. Right Axillary artery shows diffuse light echogenic disease circumferentially narrowing the lumen of the vessel causing a >75% stenosis PSV 3.97m/sec PSVR 5

Fig 5. Right Brachial artery flow normalizes to triphasic with a good PSV of 126cm/sec. is PSV 3.97m/sec PSVR

Right Brachial artery Pressure = 146mmHg

Left Brachial artery pressure = 106mmHg

- Brachial pressures deficit between right and left arms = 40mmHg

Duplex findings: The left arm arterial duplex scan showed a patent Subclavian artery from its origin with triphasic waveforms detected 94cm/sec, reducing in velocity, and becoming more resistive towards its distal end 54cm/sec. The proximal Axillary artery was patent with resistive reduced flow also. The mid-distal Axillary artery was diffusely and circumferentially diseased over an approx. 5cm length with smooth lightly echogenic material causing a severe >75% critical stenosis (PSV 445cm/sec, PSV Ratio >8).) (see fig 1). The brachial artery was patent with severely damped, tardus parvus, monophasic waveforms (25cm/sec) detected, as were the Radial and Ulnar arteries.

Due to the extent and severity of disease in the left axillary artery the right arm arteries were assessed for comparison. Significant disease was also detected, almost identical in morphology, location, and length of involvement, however not causing as severe a stenosis as that on the left side. The right brachial artery showed triphasic waveforms with some lengthening of the acceleration time.

The Carotid and vertebral arteries were also assessed as an extension of initial scan referral due to the significant disease in the axillary arteries and a high suspicion of large vessel vasculitis by the CVS.

The Carotid and Vertebral arteries were widely patent with no evidence of disease. The Temporal arteries were not assessed as this is not currently a service provided within the vascular studies department.

The suspicion of LVV vasculitis was relayed by the CVS to the SpR who ordered a CT scan and asked for a rheumatology consult.

The CT scan confirmed the findings of the Duplex scan and in addition found signs of inflammation of the Abdominal Aorta and iliac arteries, further indicating large vessel vasculitis. A subsequent GCA temporal artery scan was performed in the General Ultrasound department and showed no evidence of inflammation, no halo present.

Background information: Giant Cell Arteritis or Takayasu Arteritis:

The American college of Rheumatology (ACR) 1990 classification criteria for vasculitis are used to distinguish between GCA and TAK but recent studies believe these two vasculitides are very similar and could coexist on the same disease spectrum.

Both Takayasu and GCA affect large arteries by the process of granulomatous inflammation which typically occurs within the wall layers of medium and large size arteries. The vascular wall responds to the injury with a cascade of events resulting in hyperplasia of the intimal layer leading to luminal compromise.

The typical initial manifestations of the two vasculitides are usually different. Patients with GCA present with headaches in the temple region, jaw pain and claudication and fatigue with stiffness and pain over the shoulders and can have sudden changes in vision. Patients with GCA are usually older >50 years of age.

Patient with Takayasu arteritis are usually <40years of age and present with arm or leg claudication or chest pain. On clinical examination can be found to have no pulses in the leg or arm. Takayasu arteries more often causes long stenotic lesions resulting in local ischaemia.

The 6 criteria for TAK focuses on large vessel disease of the Aorta and its primary branches and is defined as ‘granulomatous inflammation of aorta and major branches affecting women of childbearing age’.

American college of Rheumatology (ACR) 1990 classification criteria for Takayasu Arteritis:

3 of the 6 criteria need to be present for diagnosis

1. Age at onset of disease – of 40 years or younger
2. Claudication of the extremities
3. Decreased pulsation of one or both Brachial arteries
4. Difference of at least 10mmHg in systolic blood pressure between arms
5. Bruit over one or both Subclavian arteries or Abdominal Aorta
6. Arteriographic narrowing or occlusion of the entire Aorta, its primary branches or large arteries in the upper or lower extremities that is not due to atherosclerosis fibromuscular dysplasia or other causes.

Patients with TAK generally have symmetrical presentation in paired arteries (right and left carotid arteries, right and left Axillary) and contiguous in the Aorta (sharing common border with the aorta).

Case continued:

The patient was referred to the Rheumatology team who reviewed the patient with all diagnostic imaging and blood work confirming large vessel vasculitis, but was this GCA or TAK?

The clinical symptoms of arm claudication and presence of long severe stenoses was more in keeping with Takayasu arteritis than GCA. GCA does affect the Axillary arteries but does not usually cause haemodynamic stenoses and ischaemia.

Rheumatology referred the patient for an FDG PET scan (fluorodeoxyglucose positron emission tomography) to assess disease activity and prescribed a course of corticosteroids to be commenced after the FDG PET.

FDG PET is a functional imaging technique which is based on the ability to detect enhanced glucose uptake in high activity inflammatory cells in the arterial wall. The level of uptake by these high glycolytic inflammatory cells can give an indication of the disease activity The more glucose uptake the more active the cells are. This is a whole-body scan so has the additional benefit of picking up disease activity in other vessels/locations in the body.

The FDG PET scan results showed diffuse moderate FDG uptake within the thoracic and abdominal aorta (12.8) and its major branches including the Subclavian, Common Carotid and Vertebral arteries, this was markedly avid in the left Axillary artery (max 15.4). The report concluded extensive active vasculitis.

The patient is currently tapering her course of corticosteroids and in addition is receiving weekly methotrexate injections to aid suppression of the immune system.

By E Waldegrave (Oxford University Hospitals NHS FT)

SVT Annual Scientific Meeting 2021

1st & 2nd December 2021

Manchester Central Convention Centre

Join us for an exciting two days on The Future of Vascular Science

Closing date for Abstract Submission is 26th July at Midnight. Go to https://www.vascularsociety.org.uk/asm/abstract_submission.aspx to register

SVT Evening Drinks Reception

Wednesday 1st December

The Argyle Suite, Manahatta, 188-192 Deansgate, Manchester M3 3ND

https://www.manahatta.co.uk/bars/deansgate/private-hire-manchester

Dress code – smart casual, no trainers or sportswear

Come and join the SVT for a taste of New York in the heart of Manchester at Manahatta while you chat and unwind with friends and colleagues. Prosecco and nibbles will be available from 7:30pm on a first come first served basis.

The Outer Hebrides Challenge 2021

Please support our SVT President Lee Smith and Vice President Emma Waldegrave who will be joining a team of Vascular surgeons, nurses, and healthcare scientists to take on a ruthless185-mile cycle challenge through the Outer Hebrides Islands off the coast of Scotland, in a bid to raise much-needed awareness and funding for the Circulation Foundation.

The Circulation Foundation is the UK's Vascular charity and its works tirelessly to fund and promote research into the causes, prevention, and treatment of vascular diseases.

Despite the pandemic and looming workloads, this team has committed to taking on the challenge this October to raise awareness and support for their often under-represented patients with vascular disease.

All Funds raised will go towards the funding and promotion of research into the causes, prevention, and treatment of vascular disease.

https://www.justgiving.com/fundraising/circulationfoundation-outerhebrideschallenge

CPD Questions

To keep CPD opportunities available as the pandemic continues the on-line CPD questions will now be available for the full CPD year they are released in apart from the Summer questions which will span both the current and the next CPD year to allow for their 3 month availability.

To clarify for the next CPD year 2020-2021.

The Summer 2020 questions will remain available until 31st August 2021.

The Autumn 2020 questions will remain available until 31st August 2021.

The Winter 2021 questions will remain available until 31st August 2021.

The Spring 2021 questions will be released on 1st May and will be available until 31st August 2021.

The Summer 2021 questions will be released on 1st August and will be available until 31st August 2022.

SVT CPD Online Question Officer.

Webinar: Vascular lectures from the Australasian Sonographers Association

As part of BMUS and the Australasian Sonographers Association partnership arrangement we have agreed to share parts of our webinar programmes. ASA have kindly provided us with the following lectures.

What the ?

Presented by Warren Lewis, the Owner and Senior Sonographer at Vascular One Ultrasound. He will be presenting on unusual and rare arterial pathology.

Thoracic outlet Syndrome

Presented by Andrew Grant an Ultrasound Supervisor at I-Med East Melbourne. The presentation will be on radiology win the Thoracic outlet assessing the neuro vascular bundle.

Improving the detection rate of iliofemoral vein obstruction

Presented by Daniel Rae the head sonographer at Sunshine Coast Vascular. He will be talking on improving the detection rate of iliofemoral vein obstruction covering tips and tricks he has picked up throughout his career.

The webinar is scheduled for release at 7pm Wednesday 18th August. The Webinar will be available to watch from 7pm on 18th August until midday on 30th September.

You will receive attendance details on or before 18th August via email. Please look out for these.

Fees

- Member - Free
- Non-Member - £15 (6 Webinar's in a 12-month period equal the average BMUS Membership rate)

Bookings close on 17th August @ Midday

Call for a Volunteer

Your society needs you!

At this year's SVT ASM there will be a live debate entitled:

"Should vascular ultrasound only be performed by experienced vascular scientists?"

Each side of the motion will be debated by a Surgeon, Nurse and SVT member.

The chair will invite each counterpart to deliver a 5 minute pitch.

Once all 6 have delivered their argument the chair will open up the floor to questions.

At the end of questions, the audience will be asked to vote either for or against the motion.

We are looking for a volunteer to argue against this motion alongside the SVN President & VS Hon. Secretary.

For more information or expression of interest please email conference.secretary@svtgbi.org.uk

YouTube Channel

AXREM Launch You Tube Channel

25 June 2021

Today AXREM have launched a You Tube channel which you can subscribe to by searching 'AXREM Trade Association' of follow this link?AXREM Trade Association – YouTube

The channel will feature videos to promote AXREM work, sessions/ events that AXREM have held at UKIO and other events and some more exciting content that we will share over the coming days, weeks and months.

This is all part of the AXREM marketing and social media strategy where we want to engage with as many industry colleagues, professionals working in the NHS and anyone that has an interest in medical imaging, healthcare IT and radiotherapy.

Sally Edgington, AXREM Director said "since becoming the Director of AXREM we have raised the profile of the organisation via social media, strengthened our engagement with other relevant industry organisations and this in turn is ensuring we are the voice of the medical imaging, healthcare IT and radiotherapy community. We are trying to make our engagement as interesting and current as possible so I am excited at this development, and will look forward to sharing further developments in this area over the next few weeks".

Please do subscribe to the channel to keep up to date of any new content that we post.

Professional Standards Committee

SVT Profession Standards Committee: Professional Performance Guidelines

Professional performance guidelines (PPG) are a basic explanation of what should be included in various vascular ultrasound/physiology examinations. They are similar to protocol documents produced by vascular ultrasound departments.

The updated PPGs can now be found in the Public Area of the SVT website.

SVT Professional Issues | The Society for Vascular Technology (svtgbi.org.uk)