

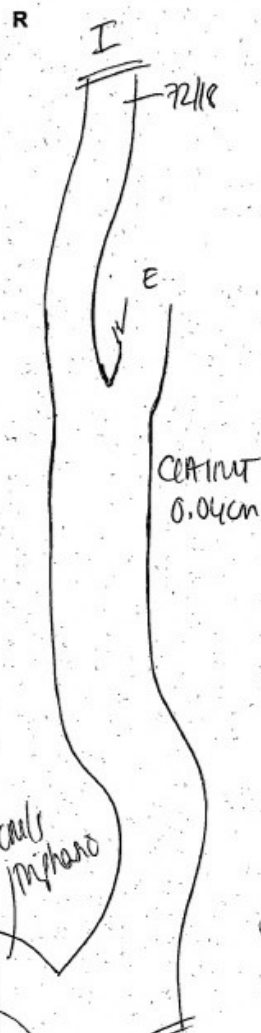
Department of Vascular Ultrasound **NHS**
Imperial College Healthcare
 4 North, Charing Cross Hospital NHS Trust
 Ext 17360 / 17322 Email: imperial.cxhvascularstudies@nhs.net

Indications: *R arm + leg weakness*
Amnesia

Consultant: *KALLADNA* Dominant hand: *right* / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	58/10	50/12	71/0	60/13	47/11	62/0



Vertebrals

Right	46/10 cm/s	Left	43/13 cm/s
	<i>Antegrade</i>		<i>Antegrade</i>

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	10-15	10-15	10-15	10-15	10-15	10-15
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
N/I	N/I	Normal, intimal thickening, plaque	N/I	N/I
		Plaque type: soft, mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:
No evidence of significant carotid stenosis bilaterally



Indications:

L Sided weakness

Dominant hand: ☒ right / ☐ left

Consultant Bentley

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	120/34	71/30	80/22	101/32	81/32	75/19

R

Vertebrals

Right	35/13 cm/s	Left	50/21 cm/s
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	15-20	10-15	10-15	10-15	15-20	15-20
50-69						
70-89						
90-99						
100						

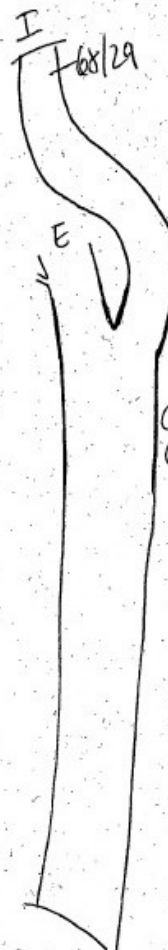
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
N/H	N/H	Normal, intimal thickening, plaque	N/H	N/IT
		Plaque type: soft, mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L



CCA/MET 0.04cm

Thyphasic 132cm/s

Indications:

Consultant: **ELMAMOUN**

Word finding difficulty

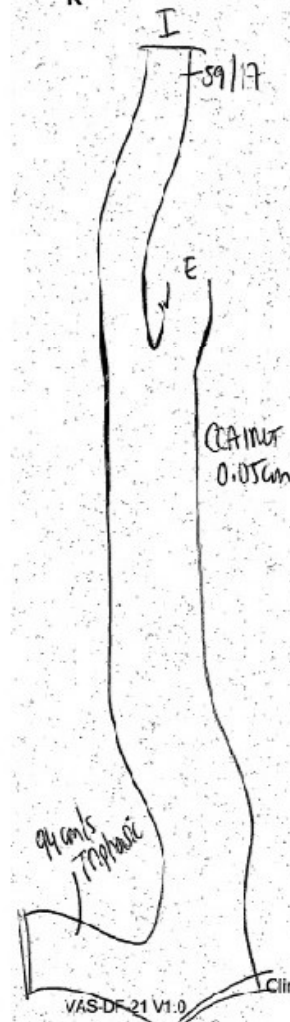
Dominant hand: **right** / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	77/17	70/12	98/13	82/17	59/15	85/11

R



Vertebrals

Right	51/13 cm/s	Left	47/8 cm/s
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	20-25	15-20	10-15	15-20	15-20	10-15
50-69						
70-89						
90-99						
100						

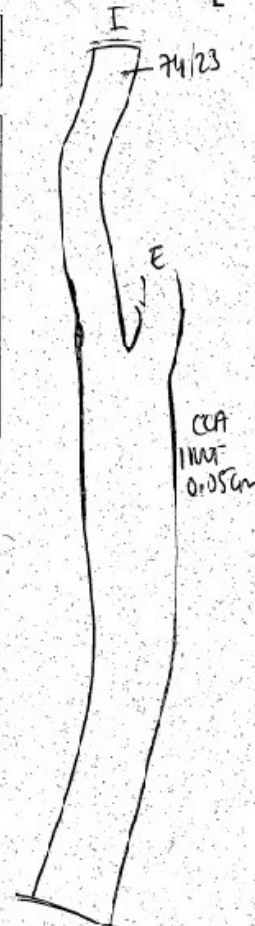
Percentage ICA stenosis graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ECST grading).

Right		Normal, intimal thickening, plaque Plaque type: soft, mixed, dense, calcified Irregular / Smooth Ulceration, dissection, tortuosity, dilation	Left	
CCA	ICA		CCA	ICA
N/H	N/H		H	H/M
				M
				S

Comments:

No evidence of significant carotid stenosis bilaterally

L



Consultant Bilawal

Indications:

Extensive neurological history
RICA stenosis on CTA

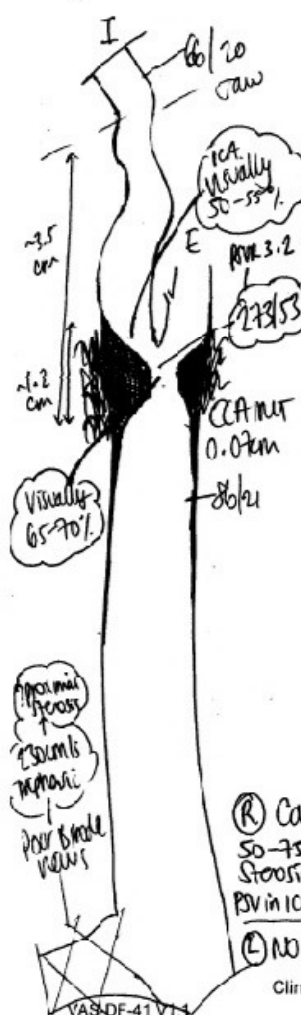
Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	273/53	24/43	210/27	122/23	108/22	114/16

R



Vertebrals

Right	33/11 cm/s	Left	46/14 cm/s
Antegrade		Antegrade	

Carotids

Approximate Percentage Stenosis					
Right			Left		
CCA	ICA	ECA	CCA	ICA	ECA
<50		>50	30-35	75-80	20-25
50-69	50-75%				
70-89	75-79%				
90-99					
100					

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <30% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis 'ESC' grading.

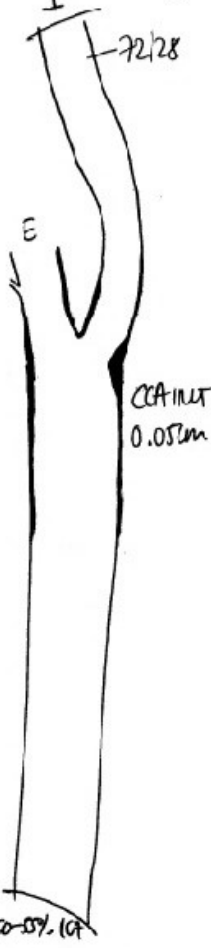
Right			Left	
CCA	ICA		CCA	ICA
P1	P1	Normal, intimal thickening, plaque	M1	M1
D/Ca	D/Ca	Plaque type: soft, mixed, dense, calcified	M	M
I	S	Irregular / Smooth	S	S
		Ulceration, dissection, tortuosity, dilation		

Comments:

(R) Calcified plaque at the bifurcation level. 50-75% distal CCA/bifurcation haemodynamic stenosis. Visually 65-70% stenosis. BV in ICA origin indicative of 70-79% haemodynamic stenosis.

(L) No evidence of significant stenosis. Visually 50-55% ICA.

L



Irvine Vascular Studies **NHS**

Imperial College Healthcare

Ground Floor, Mary Stanford Wing, St Mary's Hospital NHS Trust
Ext 23739 / 23374 Email: imperial.irvinevascular.studies@nhs.net

Indications:

Consultant **McNewly**

Polytrauma. ? carotid dissection

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	131/22	no veins	no veins	108/24	61/18	98/20

R

Vertebrals

Right	94/26 cm/s	Left	74/16 cm/s
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	10-15	NO VEINS		10-15	20-25	5-10
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximate visually as a diameter reduction at the site of stenosis (ECST grading).

Right			Left	
CCA	ICA		CCA	ICA
N	NO VEINS	Normal, intimal thickening, plaque	N	?dissection
		Plaque type: soft, mixed, dense, calcified		?thrombus-adherent to wall
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

- ② Patent CCA where seen. No veins of the bifurcation or ICA/ECA due to extensive dressings
- ③ Small ?dissection flap noted in the proximal ICA. Did not appear mobile. Does not appear to be impacting flow. Small amount of ?thrombus adhered to wall at dissection flap site

Clinical Vascular Scientist: *Chlor* AVS: Yes / (No) Date: 11/10/21

no access/veins - dressings

CCA int 0.03cm

198cm/s Triphasic

I 74/24

E

?dissection flap - not mobile

no. 6cm thrombus

CCA int 0.03cm

Irvine Vascular Studies **NHS**

Imperial College Healthcare

Ground Floor, Mary Stanford Wing, St Mary's Hospital NHS Trust
Ext 23739 / 23374 Email: imperial.irvinevascular.studies@nhs.net

Indications:

Dysphasia in March

Dominant hand: right / left

Consultant: *J. Irvine*

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler

Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	78/24	57/19	75/21	88/30	57/16	74/19

R

Vertebrals

Right	50/16 cm/s	Left	31/17 cm/s
<i>Antegrade</i>		<i>Antegrade</i>	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	15-20	10-15	10-15	15-20	10-15	10-15
50-69						
70-89						
90-99						
100						

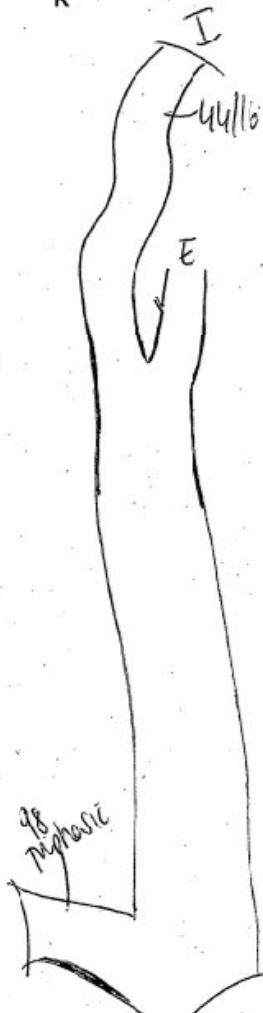
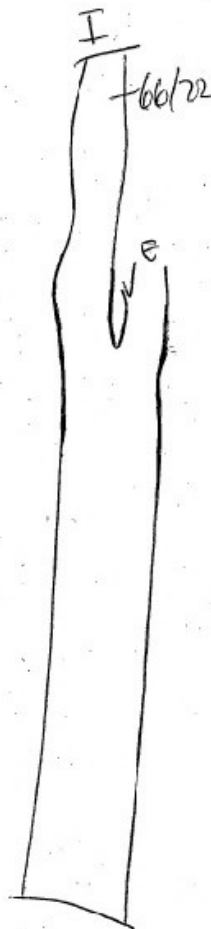
Percentage ICA stenoses graded based on hemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
IT	IT	Normal, intimal thickening, plaque	IT	IT
		Plaque type: soft, mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L



Irvine Vascular Studies **NHS**

Imperial College Healthcare
Ground Floor, Mary Stanford Wing, St Mary's Hospital NHS Trust
Ext 23739 / 23374 Email: imperial.irvinevascularstudies@nhs.net

Indications: L ICA Stenosis surveillance

No symptoms reported

Consultant: *Bicknell*

Dominant hand: *right* / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

Peak Systolic Velocity / End Diastolic Velocity (cm/s)

Right			Left		
Common	Internal	External	Common	Internal	External
82/18	75/22	102/13	77/16	<u>272/67</u>	80/11

R

Vertebrals

Right	49/12 cm/s	Left	40/11 cm/s
<i>Antegrade</i>		<i>Antegrade</i>	

Carotids

Approximate Percentage Stenosis					
Right			Left		
CCA	ICA	ECA	CCA	ICA	ECA
<50	35-40	25-30	50	30-35	<50
50-69					
70-89				<u>80-89</u>	
90-99					
100					

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ECT grading).

Right			Left	
CCA	ICA		CCA	ICA
<i>M/P</i>	<i>M/P</i>	Normal, intimal thickening, plaque	<i>M/P</i>	<i>P</i>
<i>M/K</i>	<i>M</i>	Plaque type: sof, mixed, dense, calcified	<i>M</i>	<i>B</i>
<i>S/I</i>	<i>S</i>	Irregular / Smooth	<i>I</i>	<i>I</i>
		Ulceration, dissection, tortuosity, dilation		

Comments:

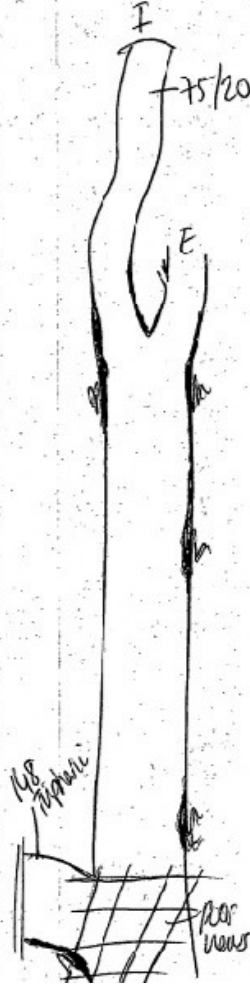
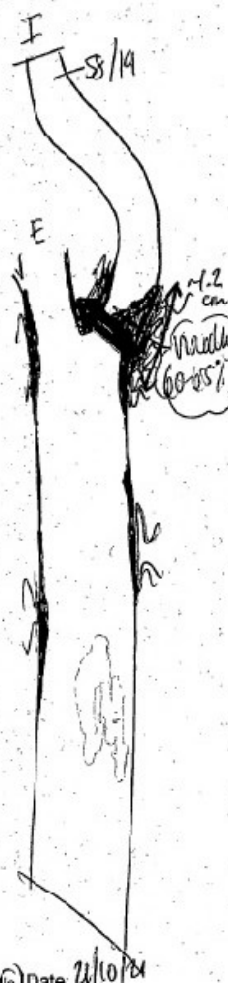
- ① No evidence of significant stenosis
- ② ICA haemodynamic 80-89% stenosis, visually 60-65% stenosis

Clinical Vascular Scientist

Chen

21/10/24

L



Department of Vascular Ultrasound **NHS**

Imperial College Healthcare
4 North, Charing Cross Hospital
Ext 17360 / 17322 Email: imperial.cvhvascularstudies@nhs.net

Indications:

Consultant Kwan

Amalurot Ajax R eye

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler
Analysis

Peak Systolic Velocity / End
Diastolic Velocity (cm/s)

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	71/22	61/22	75/16	80/29	69/26	69/19

R
I
+68/17

Vertebrals

Right	cm/s	Left	cm/s
41/13		41/17	
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	20-25	15-20	15-20	20-25	15-20	15-20
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ECST grading).

Right			Left	
CCA	ICA		CCA	ICA
IT	IT	Normal, intimal thickening, plaque	IT	IT
		Plaque type: soft mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L
I
+82/40

E
V

136
Mentor

Clinical Vascular Scientist: Chloe AVS: Yes / No Date: 29/10/24

Indications:

Consultant: *Kwan*

Impaired vision left eye

Dominant hand: *right* left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	118/24	99/18	130/16	116/26	102/33	137/25

R

Vertebrals

Right	55/15 cm/s	Left	91/21 cm/s
<i>Antegrade</i>		<i>Antegrade</i>	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	30-35	25-30	15-20	30-35	20-25	20-25
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on hemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
17/11	P1	Normal, intimal thickening, plaque	17/11	M
14/10	M	Plaque type: soft, mixed, dense, calcified	N/D	N/D
S	S	Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L

Aspheric 94

Clinical Vascular Scientist: *C. Moore*

AVS: Yes / No

Date: *29/10/21*

Indications:

Episodic of word finding difficulty

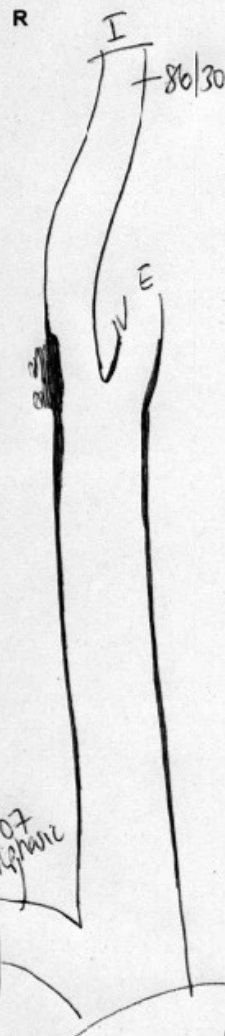
Dominant hand: right / left

Consultant: EMMAMOUN

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	93/27	56/19	78/7	86/26	73/18	114/13

R



Vertebrals

Right	78/22 cm/s	Left	66/24 cm/s
Antegrade		Antegrade	

Carotids

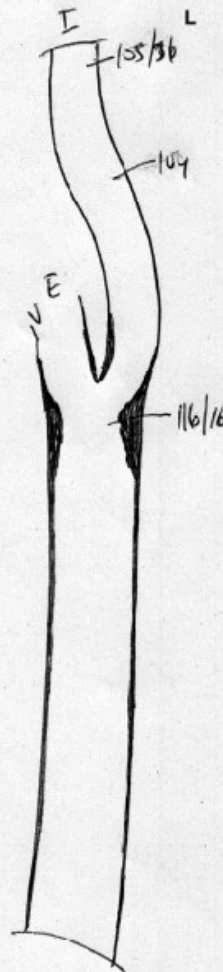
	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	20-25	30-35	20-25	45-50	20-25	15-20
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (FSCOT grading).

Right			Left	
CCA	ICA		CCA	ICA
17/11	11	Normal, intimal thickening, plaque	17/11	17/11
M	11/11	Plaque type: soft, mixed, dense, calcified	M	M
S	S	Irregular / Smooth	S/E	S
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally



Indications:

Consultant

Davies

Post L CEA. No new symptoms

Dominant hand: ☒ right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	159/22	121/18	168/21	164/31	124/32	204/16

R

Vertebrals

Right	48/12 cm/s	Left	52/21 cm/s
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	<50	20-25	20-25	45-50	<50	<50
50-69					100% B-mode veins	
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

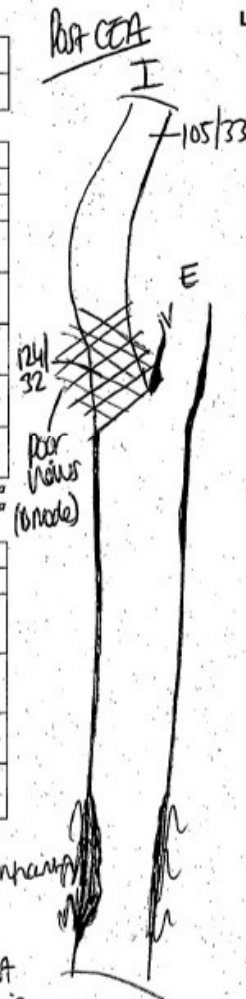
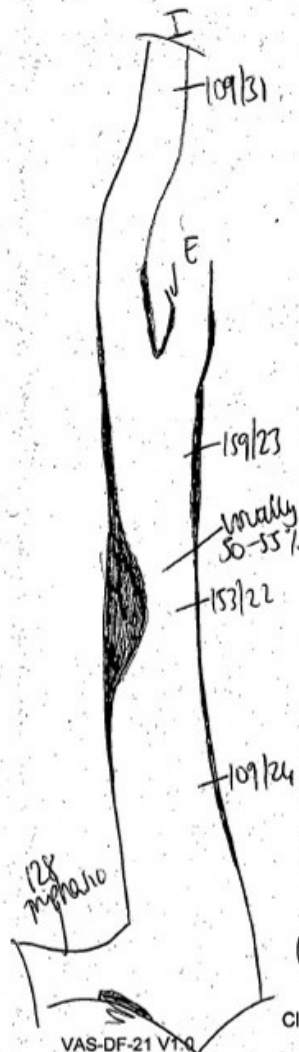
Right			Left	
CCA	ICA		CCA	ICA
PL	PE	Normal, intimal thickening, plaque	PI	No veins
M	M	Plaque type: soft, mixed, dense, calcified	Car	
S	S	Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

① No evidence of haemodynamically significant stenosis. CEA visually 50-55% stenosis

② Post CEA. Poor B-mode veins of prox ICA but no significant haemodynamic stenosis

Clinical Vascular Scientist: *Chlor* AVS: Yes / ☒ No Date: 5/11/21



Department of Vascular Ultrasound **NHS**

4 North, Charing Cross Hospital
Imperial College Healthcare
NHS Trust
Ext 17360 / 17322 Email: imperial.cxhvascularstudies@nhs.net

Indications:

stenosis, & hemodynamic

Consultant **KALADOKA**

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

Peak Systolic Velocity / End	Common	Right Internal	External	Common	Internal	External
Diastolic Velocity (cm/s)	93/18	114/40	92/11	(173/26)	112/28	166/6

R

Vertebrals

Right	81/20	cm/s	Left	56/9	cm/s
Antegrade			Antegrade		

Carotids

Approximate Percentage Stenosis					
Right			Left		
CCA	ICA	ECA	CCA	ICA	ECA
<50	<50	65-50		<50	
50-69	↓		55-60		75
70-89	↓		↓		
90-99			↓		
100					

Percentage ICA stenosis graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually of a diameter reduction at the site of stenosis (ESCT grading).

Right		Left	
CCA	ICA	CCA	ICA
PL	PL	PL	PL
M	Sten	M/Pl	M/Pl
1/s	S	1/s	1/s

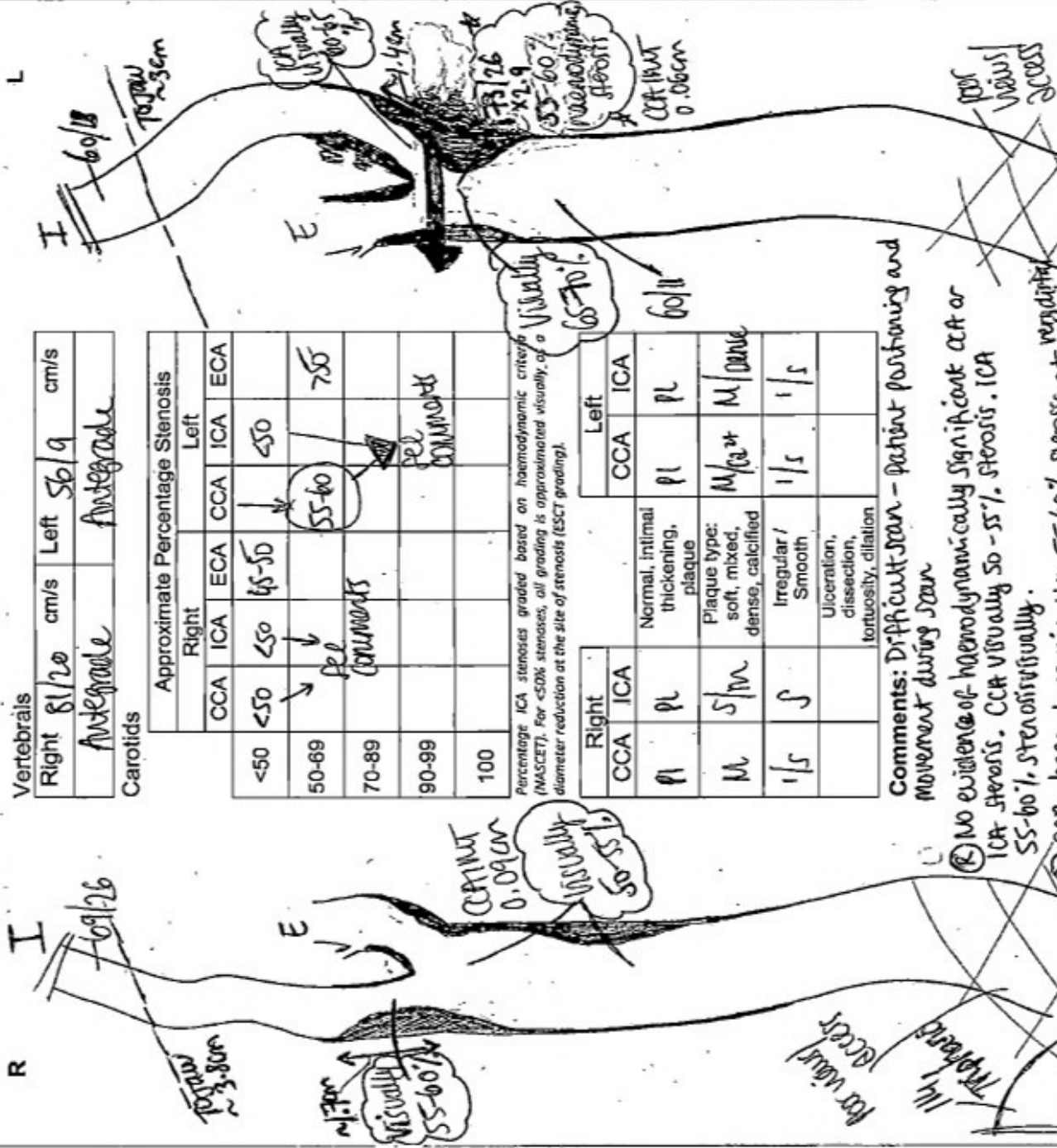
Comments: Difficult scan - Patient positioning and movement during scan

① No evidence of haemodynamically significant CCA or ICA stenosis. CCA visually 50-55% stenosis. ICA 55-60% stenosis visually.

② CCA - haemodynamically 55-60% stenosis at regurgitant bifurcation level, visually 65-70% stenosis. ICA - 60-65% visual stenosis. 50% haemodynamic stenosis.

Clinical Vascular Scientist: **Chloe**

AVS: Yes / No Date: 4/8/2



Consultant

Allen

Indications:

Known R ICA stenosis and L ICA occlusion- monitoring.
No symptoms reported.

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	81/26	174/60	111/24	74/18	—	107/30

R

Vertebrals

Right	95/25 cm/s	Left	27/14 cm/s
	Antegrade		Antegrade

Carotids

	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	30-35	↓	35-40	45-50		30-35
50-69		50-59			occluded	
70-89						
90-99						
100						

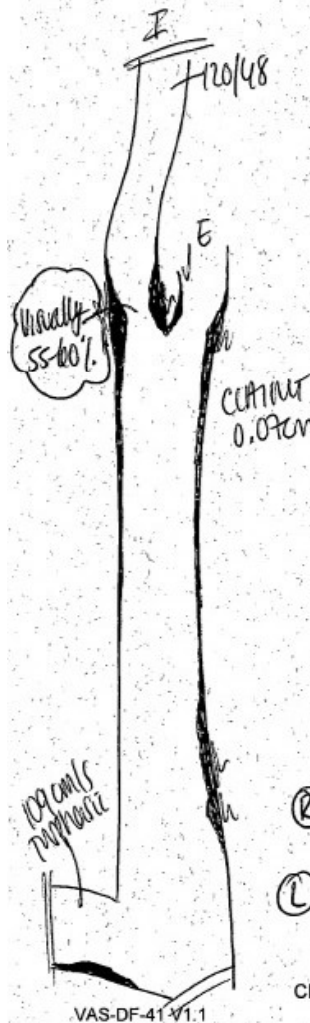
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
M/P	P	Normal, intimal thickening, plaque	M/P	
M	M/D	Plaque type: soft, mixed, dense, calcified	M/D	occluded
S/E	S/E	Irregular / Smooth	S	
		Ulceration, dissection, tortuosity, dilation		

Comments:

- ICA 50-59% haemodynamic stenosis visually 55-60% ICA stenosis
- ICA occluded proximally - no clear views of the distal ICA.

Clinical Vascular Scientist: *Allen* AVS: Yes / No Date: 9/8/21
Page 1 of 1



Indications:

Patient denies symptoms.

Consultant

Shalhoub

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	67/16	434/160	177/21	148/30	80/22	112/17



Vertebrals

Right 31/10 cm/s	Left 72/25 cm/s
Antegrade	Antegrade

Carotids

	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	45-49		750	45-49	25-30	25-30
50-69						
70-89						
90-99		90-99				
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
P	P	Normal, intimal thickening, plaque	P	P
mixed/calcified	mixed	Plaque type: soft, mixed, dense, calcified	mixed/calcified	mixed
Smooth	Smooth	Irregular / Smooth	Smooth	Smooth
		Ulceration, dissection, tortuosity, dilation		

Comments:

□ Raised velocities associated with a 90-99% stenosis identified within the (R) proximal ICA.

□ No haemodynamically significant stenosis identified on the left side.

Clinical Vascular Scientist:

Ar. Chahal

AVS: Yes / No Date: 10/08/21

Indications: - Known carotid stenosis
No new symptoms reported

Consultant: RIGA

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	70/13	77/18	136/17	67/16	90/25	188/23

R

Vertebrals

Right 52/14 cm/s	Left 59/21 cm/s
Antegrade	Antegrade

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	30-35	40-45	25-30	40-45	<50	<50
50-69						
70-89						
90-99						
100						

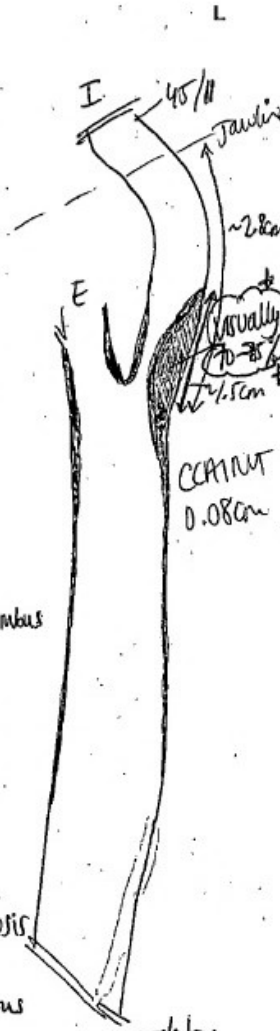
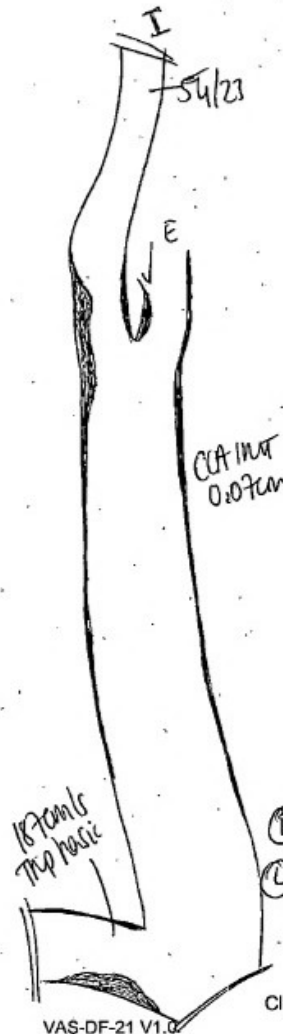
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
11/12	PL	Normal, intimal thickening, plaque	11/12	PL/?thrombus
M	S/M	Plaque type: soft, mixed, dense, calcified	S/M	S/M
S	S/I	Irregular / Smooth	S	S
		Ulceration, dissection, tortuosity, dilation		

Comments:

- ② No evidence of significant stenosis
- ④ ICA - no haemodynamically significant stenosis
* - visually 70-75% stenosis *
↳ predominantly left plaque/thrombus

Clinical Vascular Scientist: *Chalce* AVS: Yes / No Date: 25/8/21



Indications:

Left facial numbness

Dominant hand: right / left

Consultant JENKINS

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	121/17	100/14	126/14	89/16	91/27	84/7

R

Vertebrals

Right	32/11 cm/s	Left	52/17 cm/s
Antegrade		Antegrade	

Carotids

	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	30-35	15-20	15-20	30-35	15-20	15-20
50-69						
70-89						
90-99						
100						

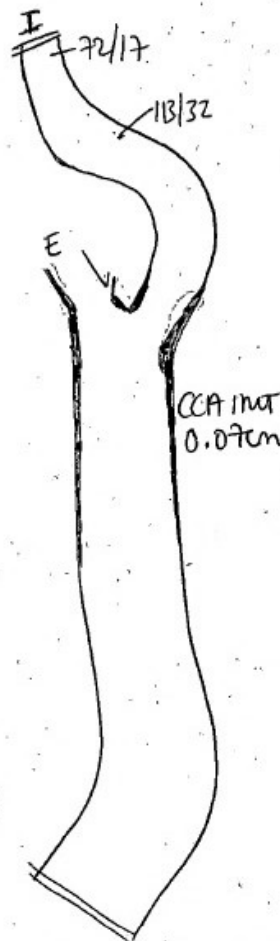
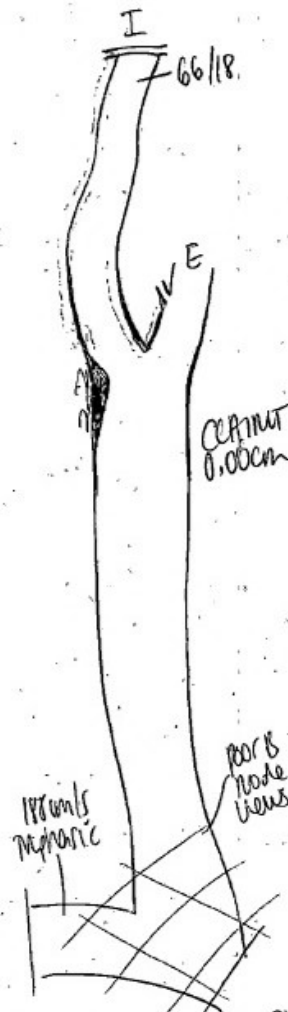
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
11/11	11/11	Normal, intimal thickening, plaque	11/11	11/11
11/11	11	Plaque type: soft, mixed, dense, calcified	11	11
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis

L



Department of Vascular Ultrasound **NHS**

Imperial College Healthcare
4 North, Charing Cross Hospital
Ext 17360 / 17322 Email: imperial.cxhvascularstudies@nhs.net
NHS Trust

Indications: 3x R sided weakness

CTA - left subclavian + vertebral thrombus
R ICA web

Dominant hand: right / left

Consultant: KATLADIA

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	80/16	95/27	104/16	101/25	90/23	104/15

R



Vertebrals

Right	cm/s	Left	cm/s
8/18		6/18	
Antegrade		Antegrade	

Carotids

	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	25-30	20-25	10-15	15-20	20-25	15-20
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
11/11	11/11	Normal, intimal thickening, plaque	11	11/11
M	M	Plaque type: soft, mixed, dense, calcified		M
S	S	Irregular / Smooth		S
		Ulceration, dissection, tortuosity, dilation		

Comments:

① No evidence of significant stenosis
No ICA web seen

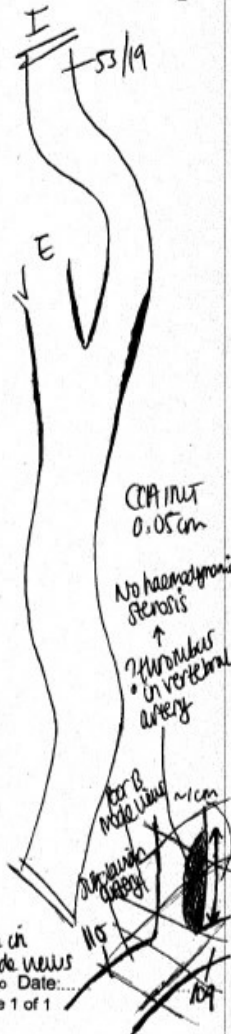
② No evidence of significant carotid stenosis
Thrombus noted in vertebral artery origin. Does not appear to be causing haemodynamic stenosis. No thrombus seen in subclavian artery - poor B-mode views

Clinical Vascular Scientist: ... AVS: Yes / No Date: ...

Michael / Stuart (MVS)

Page 1 of 1

L



Indications:

Consultant **GIBBS**

Pre-op carotid assessment

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	88/11	—	159/32	77/26	104/33	262/40

R

Vertebrals

Right	47/15 cm/s	Left	76/33 cm/s
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	40-45			25-30	15-20	
50-69		>50			>50	
70-89						
90-99						
100						

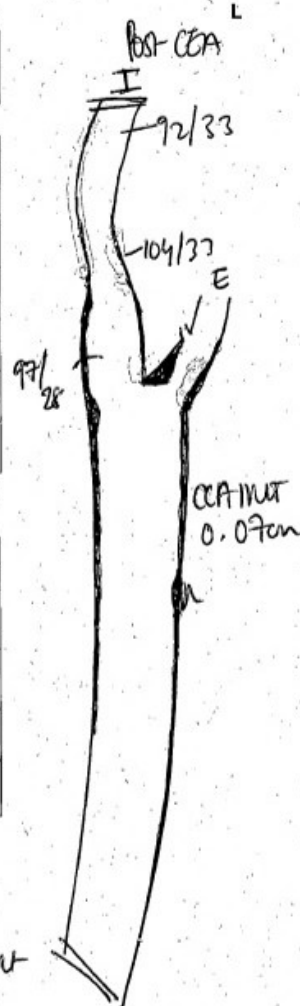
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
IT/PI		Normal, intimal thickening, plaque	IT/PI	IT
M		Plaque type: soft, mixed, dense, calcified		
S		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

- ICA occluded. No significant CCA stenosis
- For CCA - No evidence of significant CCA or ICA stenosis

Clinical Vascular Scientist: **Allen** AVS: Yes / No Date: **26/6/21**



Indications: RIGHT CEA DECEMBER 2020

Consultant: BICKNELL

~75% ICA Stenosis
Surveillance duplex

Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	94/25	107/40	103/20	85/29	157/58	134/19

R



Vertebrals

Right	45/14 cm/s	Left	39/12 cm/s
Antegrade		Antegrade	

Carotids

	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	40-45	25-30	15-20	45-50	↓	15-20
50-69				50-59		
70-89				See Comments		
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

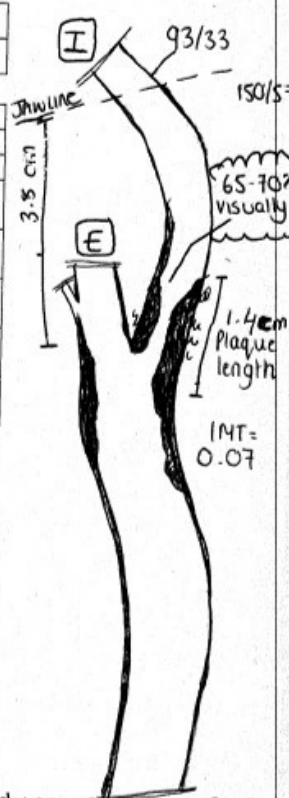
Right			Left	
CCA	ICA		CCA	ICA
IT/P	NT-CEA	Normal, intimal thickening, plaque	IT/P	P
Mux	Mix	Plaque type: soft, mixed, dense, calcified	Mux	Mix
Ir	Sm	Irregular / Smooth	Ir	Ir
—	—	Ulceration, dissection, tortuosity, dilation	—	—

Comments:

RIGHT → No evidence of any haemodynamically or visually significant stenosis or lesions

LEFT → Haemodynamically, left ICA 50-59% stenosis
Visually 65-70% stenosis

L



Indications:

Left face, arm, leg numbness

Dominant hand: ☒ right / ☐ left

Consultant: HMP - coll

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	109/36	89/17	93/23	94/32	93/23	81/13

R

I 88/32

E

CCA int 0.07cm

Vertebrals

Right 36/13 cm/s	Left 46/17 cm/s
Antegrade	Antegrade

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	15-20	15-20	15-20	15-20	15-20	15-20
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right		Normal, intimal thickening, plaque	Left	
CCA	ICA		CCA	ICA
IT	IT		IT	IT
		Plaque type: soft, mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L

I 67/28

E

CCA int 0.07cm

Trophane 83

Department of Vascular Ultrasound **NHS**

Imperial College Healthcare
4 North, Charing Cross Hospital
Ext 17360 / 17322 Email: imperial.cxhvascularstudies@nhs.net

Indications:

Consultant **HADJ - COL**

Ram numbness + heaviness

Dominant hand: **right** / left

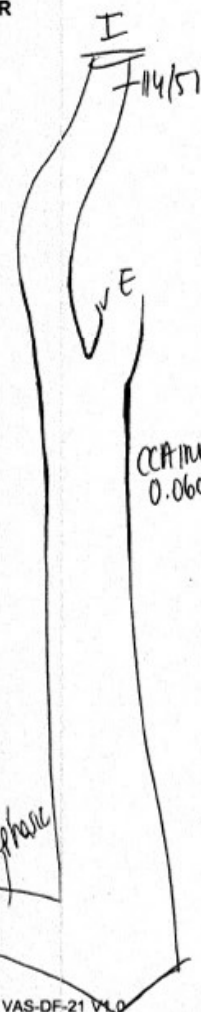
Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

Peak Systolic Velocity / End Diastolic Velocity (cm/s)

Right			Left		
Common	Internal	External	Common	Internal	External
102/37	98/33	90/16	108/37	67/20	77/20

R



Vertebrals

Right 57/24 cm/s	Left 69/27 cm/s
Antegrade	Antegrade

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	15-20	15-20	15-20	15-20	15-20	15-20
50-69						
70-89						
90-99						
100						

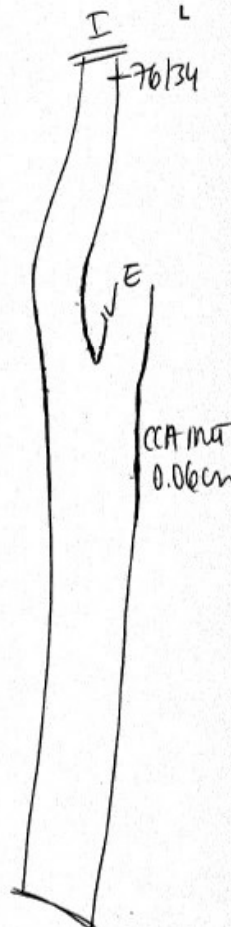
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
IT	IT	Normal, intimal thickening, plaque	IT	IT
		Plaque type: soft, mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L



Clinical Vascular Scientist: **Cullac** Date: **27/8/14**

Department of Vascular Ultrasound **NHS**

Imperial College Healthcare
4 North, Charing Cross Hospital
NHS Trust
Ext 17360 / 17322 Email: imperial.cvhvascularstudies@nhs.net

Indications:

Consultant Brown

12 monocular vision loss

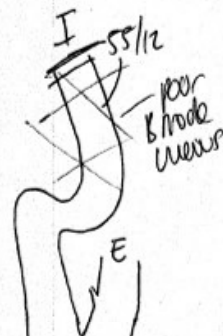
Dominant hand: right / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	102/18	85/13	85/22	119/12	67/11	106/11

R



CCA int
0.04cm

Vertebrals

Right	48/16 cm/s	Left	48/19 cm/s
	Antegrade		Antegrade

Carotids

	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	5-10	5-10	5-10	5-10	5-10	5-10
50-69						
70-89						
90-99						
100						

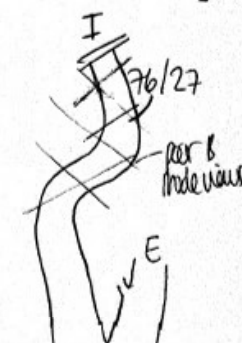
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
N/IT	N/IT	Normal, intimal thickening, plaque	N/IT	N/IT
		Plaque type: soft, mixed, dense, calcified		
		Irregular / Smooth		
		Ulceration, dissection, tortuosity, dilation		

Comments:

no evidence of significant carotid stenosis bilaterally

L



CCA int
0.04cm

131 cm/s
17/12

Irvine Vascular Studies **NHS**

Imperial College Healthcare

Ground Floor, Mary Stanford Wing, St Mary's Hospital NHS Trust
Ext 23739 / 23374 Email: imperial.irvinevascular.studies@nhs.net

Indications:

R carotid stent
L Occluded ICA

Dominant hand: right / left

Consultant Bichnell

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	109/29	67/19	122/24	86/14	—	117/20

R

Vertebrals

Right	58/19 cm/s	Left	75/29 cm/s
Antegrade		Antegrade	

Carotids

Approximate Percentage Stenosis						
Right			Left			
CCA	ICA	ECA	CCA	ICA	ECA	
<50	<50	40-45	<50		30-35	
50-69						
70-89						
90-99						
100						

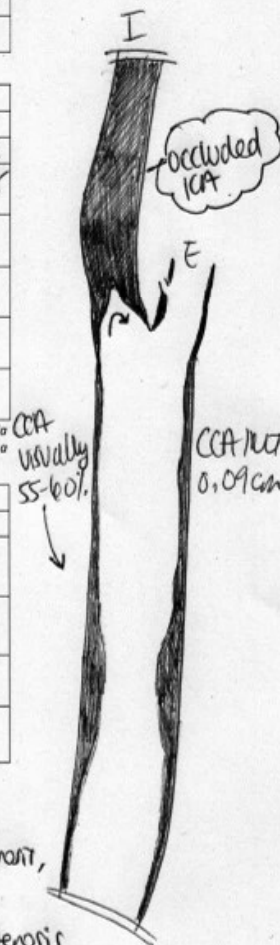
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
P		Normal, intimal thickening, plaque	P	
M		Plaque type: soft, mixed, dense, calcified	M	
S		Irregular / Smooth	S	
		Ulceration, dissection, tortuosity, dilation		

Comments:

- ① R ICA stent widely patent
CCA no haemodynamically significant stenosis, visually 50-55%.
- ② L ICA occluded
CCA no haemodynamically significant stenosis, visually 55-60% stenosis.

L



Indications:

Consultant **KWAN**

Dysarthria - R hand loss of dexterity

Dominant hand (right) / left

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis

	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	74/10	53/10	80/5	77/16	62/13	73/3

R

Vertebrals

Right 38/7 cm/s	Left 56/11 cm/s
Antegrade	Antegrade

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	20-25	35-40	15-20	25-30	15-20	15-20
50-69						
70-89						
90-99						
100						

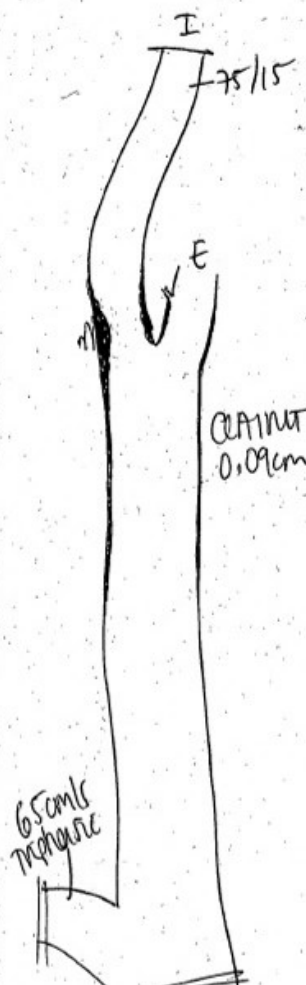
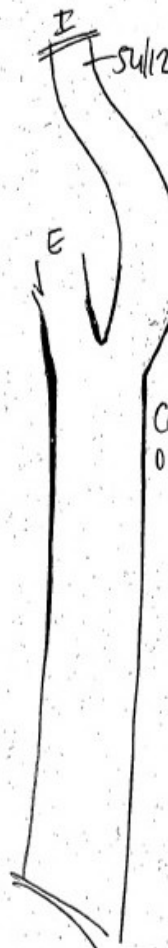
Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right			Left	
CCA	ICA		CCA	ICA
17/11	11	Normal, intimal thickening, plaque	17/11	11
M	M/D	Plaque type: soft, mixed, dense, calcified	M	
S	I/S	Irregular / Smooth	S	
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L

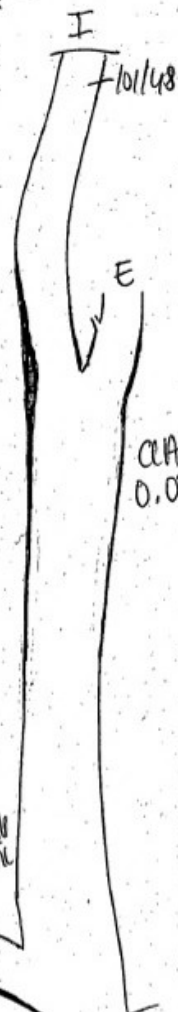


Consultant	KWATN	Indications:	R sided paraspina R facial droop	Dominant hand: <input checked="" type="radio"/> right / <input type="radio"/> left
------------	-------	--------------	-------------------------------------	--

Duplex Ultrasound: Carotid and Vertebral Arteries

Spectral Doppler Analysis	Right			Left		
	Common	Internal	External	Common	Internal	External
Peak Systolic Velocity / End Diastolic Velocity (cm/s)	85/35	118/53	101/27	88/33	86/27	91/16

R



Vertebrals

Right	54/22 cm/s	Left	47/18 cm/s
Antegrade		Antegrade	

Carotids

	Approximate Percentage Stenosis					
	Right			Left		
	CCA	ICA	ECA	CCA	ICA	ECA
<50	20-25	30-35	10-15	25-30	10-15	10-15
50-69						
70-89						
90-99						
100						

Percentage ICA stenoses graded based on haemodynamic criteria (NASCET). For <50% stenoses, all grading is approximated visually as a diameter reduction at the site of stenosis (ESCT grading).

Right		Normal, intimal thickening, plaque	Left	
CCA	ICA		CCA	ICA
11/11	11		11/11	11
M		Plaque type: soft, mixed, dense, calcified	M	
S		Irregular / Smooth	S	
		Ulceration, dissection, tortuosity, dilation		

Comments:

No evidence of significant carotid stenosis bilaterally

L

