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Lampiran 1

LEMBAR PENJELASAN SEBELUM TINDAKAN

NASKAH PENJELASAN UNTUK PESERTA

Assalamu'alaikum warahmatullahi wabarakatuh,

Salam sejahtera teriring doa semoga segala aktivitas kita mendapat rahmat dan ridho Allah SWT. Saya dr. M. Syairozi Hidayat yang akan melakukan penelitian tentang **PERBANDINGAN EFEK LATIHAN RESISTENSI LENGAN BAWAH INTENSITAS RENDAH DAN INTENSITAS SEDANG TERHADAP MATURASI FISTULA ARTERIOVENA PADA PASIEN DENGAN PENYAKIT GINJAL STADIUM AKHIR**, kami bermaksud mengikutsertakan anda sebagai subyek pada penelitian ini.

Penelitian ini bertujuan untuk mengetahui pengaruh intensitas latihan tangan yang berbeda terhadap maturasi dari fistula arteriovena pada pasien dengan penyakit ginjal kronik yang rutin menjalani hemodialisis. Hasil penelitian ini diharapkan dapat menjadi acuan untuk mempertimbangkan dosis latihan resistensi yang sesuai pada pasien paska operasi fistula arteriovena.

Subjek yang dibutuhkan pada penelitian ini berjumlah 28 orang yang akan dibagi menjadi dua kelompok secara acak. Kelompok pertama akan mendapatkan intervensi berupa latihan resistensi (penguatan) isometrik lengan bawah dengan intensitas rendah (beban ringan). Kelompok kedua akan mendapatkan intervensi berupa latihan resistensi isometrik lengan bawah intensitas menengah (beban sedang). Setiap latihan dilakukan setiap hari, di rumah masing-masing, dengan durasi latihan 3-5 menit setiap latihannya. Latihan akan dilaksanakan selama 4 minggu.

Adapun prosedur yang akan dilaksanakan pada penelitian ini yaitu:

1. Wawancara dan pemeriksaan fisik peserta
Peserta akan diwawancara mengenai identitas, tempat dan tanggal lahir, umur, alamat, status pernikahan dan pekerjaan, riwayat penyakit saat ini, riwayat penyakit lain, Pemeriksaan fisik yang dilakukan berupa berat badan, tinggi badan, tanda vital, fungsi muskuloskeletal khususnya pada lengan bawah lokasi fistula arteriovena, fungsi kardiorespirasi, dan fungsi neuromuskular.
2. Pemeriksaan USG doppler
Pemeriksaan USG doppler dilakukan di Instalasi Radiologi RSUP dr. Wahidin Sudirohusodo oleh radiologis yang kompeten. Dilakukan sebanyak dua kali yaitu 24 jam paska operasi dan setelah 4 minggu menjalani latihan.
3. Penentuan intensitas latihan
Pasien dilakukan penentuan *Maximum Voluntray Isometric Contraction* (MVIC) menggunakan *handgrip dynamometer* oleh dokter peneliti dan ditentukan beban yang sesuai untuk masing-masing pasien. Penentuan ini dilakukan pada awal pemeriksaan.
4. Pemberian Intervensi
Kelompok pertama akan melakukan program latihan resistensi lengan bawah dengan intensitas rendah (20% dari MVIC sebanyak 15 kali kontraksi, tahan 10 detik dan istirahat 2 detik setiap kontraksi, setiap hari, selama 4 minggu) dengan menggunakan *handgrip dynamometer*. Setiap sesi latihan akan dicatat

pada diary latihan dan dilakukan pemantauan berkala oleh peneliti dengan menggunakan media sosial *whatsapp* atau telepon.

Kelompok kedua akan melakukan program latihan resistensi lengan bawah dengan intensitas sedang (50% dari MVIC sebanyak 15 kali kontraksi, tahan 10 detik dan istirahat 2 detik setiap kontraksi, setiap hari, selama 4 minggu) dengan menggunakan *handgrip dynamometer*. Setiap sesi latihan akan dicatat pada diary latihan dan dilakukan pemantauan berkala oleh peneliti dengan menggunakan media sosial *whatsapp* atau telepon.

Latihan ini tergolong relatif aman untuk subjek penelitian, berdasarkan penelitian sebelumnya yang melakukan intervensi yang sama, tidak ada efek samping yang berarti. Namun jika pasien merasakan hal-hal yang tidak nyaman selama penelitian seperti (nyeri, kelelahan, perdarahan luka operasi, pusing, nyeri kepala, pandangan kabur, atau keluhan lainnya) pasien dapat menghubungi peneliti kapanpun untuk mendapatkan penanganan selanjutnya.

Biaya penelitian ini akan ditanggung sepenuhnya oleh dokter yang melakukan penelitian dan tidak dibebankan pada peserta. Kami menjamin kerahasiaan semua data pada penelitian ini. Semua hasil pemeriksaan yang terkait dengan penelitian ini akan disampaikan kepada anda secara terbuka.

Kami sangat mengharapkan partisipasi anda, dengan bersedia untuk ikut dalam penelitian ini secara sukarela. Bila anda bersedia, kami berharap anda dapat memberikan persetujuan dalam bentuk lisan dan tertulis.

Bila anda merasa masih ada yang belum jelas atau belum dimengerti dengan baik, anda dapat menanyakan atau minta penjelasan pada saya. Terima kasih.

Lampiran 2

LEMBAR PERSETUJUAN PESERTA SURAT PERSETUJUAN MENGIKUTI PENELITIAN

Yang bertandatangan di bawah ini:

Nama :
Tempat tanggal lahir :
Umur :
Alamat :
Status pernikahan :
Pekerjaan :

Dengan ini menyatakan bahwa setelah saya mendapatkan penjelasan, telah diberi kesempatan bertanya, dan pertanyaan saya telah terjawab sepenuhnya dengan jelas serta saya telah memahami sepenuhnya maksud dan tujuan penelitian yang berjudul:

PERBANDINGAN EFEK LATIHAN RESISTENSI LENGAN BAWAH INTENSITAS RENDAH DAN INTENSITAS SEDANG TERHADAP MATURASI FISTULA ARTERIOVENA PADA PASIEN DENGAN PENYAKIT GINJAL STADIUM AKHIR

Maka saya menyatakan **SETUJU** untuk ikut serta dalam penelitian ini, bersedia dan tidak keberatan mematuhi semua ketentuan yang berlaku dalam penelitian ini, dan memberikan keterangan yang sebenarnya.

Demikian pernyataan ini saya buat dalam keadaan sadar dan tanpa paksaan untuk digunakan sebagaimana mestinya.

	NAMA		TANDA TANGAN	TANGGAL
Peserta				
Saksi				

Identitas Peneliti

Nama : dr. M. Syairozi Hidayat
Alamat : Jl. Perintis Kemerdekaan No.KM 10, Tamalanrea Indah, Kec. Tamalanrea, Kota Makassar, Sulawesi Selatan 90245
No. HP : 081256938038

Lampiran 3

FORMULIR PEMERIKSAAN PESERTA PENELITIAN
PERBANDINGAN EFEK LATIHAN RESISTENSI LENGAN BAWAH
INTENSITAS RENDAH DAN INTENSITAS SEDANG TERHADAP MATURASI
FISTULA ARTERIOVENA PADA PASIEN DENGAN PENYAKIT GINJAL
STADIUM AKHIR

Tanggal pengambilan data : _____

A. IDENTITAS PESERTA

1. Nama responden :
2. Tanggal lahir :
3. Usia :
4. Jenis kelamin :
5. Alamat lengkap :
6. Nomor telepon :
7. Agama :
8. Pendidikan :
9. Pekerjaan :
10. Jenis pekerjaan :

B. RIWAYAT PESERTA

1. Riwayat Penyakit Ginjal Kronik : Ya/Tidak
 - Onset : kali
 - Hemodialisis Rutin : bulan / tahun
 - Riwayat operasi AVF :
2. Penyakit lain saat ini : ADA / TIDAK ADA
 - Jika ada
 - Jenis penyakit :
 - Onset penyakit :
 - Obat yang dikonsumsi :
3. Jenis operasi AVF :
4. Merokok : Ya/Tidak

C. PEMERIKSAAN FISIK

- | | | |
|---------------|---|-------------------|
| Berat badan | : | kg |
| Tinggi badan | : | cm |
| IMT | : | kg/m ² |
| Tekanan darah | : | mmHg |
| Nadi | : | kali/menit |
| Pernafasan | ; | kali/menit |

Suhu : °C
 SpO2 : %

Status Muskuloskeletal :

- ROM :
- MMT :
- Lokalis area operasi
 - Look :
 - Feel :
 - Move :

Status Neuromuskuler :

- Sensibilitas (pinprick dan light touch) :

D. PEMERIKSAAN PENUNJANG

Radiologi

USG Doppler Awal :

- Kedalaman vena :
- Volume aliran darah :
- Diameter vena :

USG Doppler Awal :

- Kedalaman vena :
- Volume aliran darah :
- Diameter vena :

Laboratorium

- Darah rutin :
- Fungsi koagulasi :
- Gula darah :
- HbA1C :
- Ureum :
- Creatinin :
- Profil lipid :
- PT,APTT,INR :
- D-Dimer :
- Lain-lain :

Lampiran 4

LOGBOOK LATIHAN

Minggu 1 2 3 4

Hari	Tanggal	Sudah Latihan	Keluhan/efek samping	Keterangan

Catatan :

-

Lampiran 5

HASIL ANALISIS DATA

KARAKTERISTIK SUBJEK PENELITIAN

UJI NORMALITAS VARIABEL NUMERIK USIA, IMT, MVIC

Case Processing Summary

	Intensitas Latihan	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Usia	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
MVIC	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Indeks massa tubuh	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%

Descriptives

	Intensitas Latihan	Statistic	Std. Error
Usia	Intensitas rendah	Mean	54.8571
		Lower Bound	52.6169
		95% Confidence Interval for Mean	57.0974
		Upper Bound	
		5% Trimmed Mean	54.7857
		Median	54.5000
		Variance	15.055
		Std. Deviation	3.88007
		Minimum	49.00
		Maximum	62.00
		Range	13.00
		Interquartile Range	5.25
		Skewness	.393
		Kurtosis	-.540
	Intensitas sedang	Mean	51.7143
		Lower Bound	45.4201
		95% Confidence Interval for Mean	58.0084
		Upper Bound	
		5% Trimmed Mean	52.6825
		Median	52.5000
		Variance	118.835

MVIC	Intensitas rendah	Std. Deviation	10.90115	
		Minimum	19.00	
		Maximum	67.00	
		Range	48.00	
		Interquartile Range	8.50	
		Skewness	-2.082	.597
		Kurtosis	6.684	1.154
		Mean	13.0000	.68541
		95% Confidence Interval for Mean	Lower Bound 11.5193 Upper Bound 14.4807	
		5% Trimmed Mean	12.8889	
		Median	12.5000	
		Variance	6.577	
	Intensitas sedang	Std. Deviation	2.56455	
		Minimum	10.00	
		Maximum	18.00	
		Range	8.00	
		Interquartile Range	4.38	
		Skewness	.619	.597
		Kurtosis	-.706	1.154
		Mean	13.6429	.62553
		95% Confidence Interval for Mean	Lower Bound 12.2915 Upper Bound 14.9942	
		5% Trimmed Mean	13.6032	
		Median	13.5000	
		Variance	5.478	
	Intensitas rendah	Std. Deviation	2.34052	
		Minimum	10.00	
		Maximum	18.00	
		Range	8.00	
		Interquartile Range	4.25	
		Skewness	.210	.597
		Kurtosis	-.803	1.154
		Mean	23.3800	.67310
		95% Confidence Interval for Mean	Lower Bound 21.9259 Upper Bound 24.8341	
		5% Trimmed Mean	23.3278	
		Median	23.5850	
		Variance	6.343	
Indeks massa tubuh	Intensitas rendah	Std. Deviation	2.51850	
		Minimum	19.50	
		Maximum	28.20	
		Range	8.70	
		Interquartile Range	4.49	
		Skewness	.175	.597

Intensitas sedang	Kurtosis	-1.631	1.154
	Mean	24.3614	.66609
	95% Confidence Interval for Mean	Lower Bound	22.9224
		Upper Bound	25.8004
	5% Trimmed Mean	24.3794	
	Median	24.2100	
	Variance	6.212	
	Std. Deviation	2.49229	
	Minimum	20.70	
	Maximum	27.70	
	Range	7.00	
	Interquartile Range	5.10	
	Skewness	.029	.597
	Kurtosis	-1.631	1.154

Tests of Normality

	Intensitas Latihan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Usia	Intensitas rendah	.126	14	.200*	.961	14	.744
	Intensitas sedang	.261	14	.010	.788	14	.004
MVIC	Intensitas rendah	.152	14	.200*	.926	14	.271
	Intensitas sedang	.129	14	.200*	.962	14	.762
Indeks massa tubuh	Intensitas rendah	.155	14	.200*	.941	14	.436
	Intensitas sedang	.196	14	.149	.902	14	.120

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

ANALISIS BIVARIAT KARAKTERISTIK MVIC, IMT DAN USIA

Group Statistics

	Intensitas Latihan	N	Mean	Std. Deviation	Std. Error Mean
MVIC	Intensitas rendah	14	13.0000	2.56455	.68541
	Intensitas sedang	14	13.6429	2.34052	.62553
Indeks massa tubuh	Intensitas rendah	14	23.3800	2.51850	.67310
	Intensitas sedang	14	24.3614	2.49229	.66609

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference

						tailed)			Lower	Upper
MVIC	Equal variance s assumed	.08 3	.77 5	-.693	26	.495	-.64286	.92794	- 2.5502 6	1.2645 5
	Equal variance s not assumed			-.693	25.78 6	.495	-.64286	.92794	- 2.5510 3	1.2653 2
Indek s mass a tubuh	Equal variance s assumed	.00 0	.98 8	- 1.03 6	26	.310	-.98143	.94696	- 2.9279 4	.96508
	Equal variance s not assumed			- 1.03 6	25.99 7	.310	-.98143	.94696	- 2.9279 5	.96509

Mann-Whitney Test

Ranks				
	Intensitas Latihan	N	Mean Rank	Sum of Ranks
Usia	Intensitas rendah	14	15.96	223.50
	Intensitas sedang	14	13.04	182.50
	Total	28		

Test Statistics ^a	
	Usia
Mann-Whitney U	77.500
Wilcoxon W	182.500
Z	-.945
Asymp. Sig. (2-tailed)	.345
Exact Sig. [2*(1-tailed Sig.)]	.352 ^b

a. Grouping Variable: Intensitas Latihan

b. Not corrected for ties.

ANALISIS BIVARIAT KARAKTERISTIK JENIS KELAMIN, DM TIPE 2,

MATURASI FISTULA

DM Tipe 2 * Intensitas Latihan

Crosstab					
			Intensitas Latihan		Total
			Intensitas rendah	Intensitas sedang	
DM Tipe 2	DM	Count	12	11	23
		% within DM Tipe 2	52.2%	47.8%	100.0%
	Tidak DM	Count	2	3	5
		% within DM Tipe 2	40.0%	60.0%	100.0%
Total	Count		14	14	28
	% within DM Tipe 2		50.0%	50.0%	100.0%

ANALISIS PAIRED T TES KEDALAMAN VENA, DIAMETER VENA,
VOLUME ALIRAN VENA LATIHAN INTENSITAS RENDAH

Intensitas Latihan

Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Vein depth PRE	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
Blow flow vol PRE	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
Vein diameter PRE	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
Vein depth POST	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
Blood flow POST	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
Vein diameter POST	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%

Descriptives

		Statistic	Std. Error
Vein depth PRE	Mean	2.8643	.15177
	Lower Bound	2.5364	
	95% Confidence Interval for Mean		
	Upper Bound	3.1922	
	5% Trimmed Mean	2.8548	
	Median	2.9000	
	Variance	.322	
	Std. Deviation	.56787	
	Minimum	2.10	
	Maximum	3.80	
	Range	1.70	
	Interquartile Range	.78	
	Skewness	.424	.597
	Kurtosis	-.718	1.154

Blow flow vol PRE	Intensitas rendah	Mean		233.5543	16.97525	
			Lower	196.8815		
		95% Confidence Interval for	Bound			
		Mean	Upper	270.2271		
			Bound			
		5% Trimmed Mean		235.8409		
		Median		233.3500		
		Variance		4034.229		
		Std. Deviation		63.51558		
		Minimum		121.45		
		Maximum		304.50		
		Range		183.05		
		Interquartile Range		109.98		
		Skewness		-.563		.597
		Kurtosis		-.859		1.154
Vein diameter PRE	Intensitas rendah	Mean		3.5500	.17376	
			Lower	3.1746		
		95% Confidence Interval for	Bound			
		Mean	Upper	3.9254		
			Bound			
		5% Trimmed Mean		3.5444		
		Median		3.5000		
		Variance		.423		
		Std. Deviation		.65015		
		Minimum		2.60		
		Maximum		4.60		
		Range		2.00		
		Interquartile Range		1.23		
		Skewness		.146		.597
		Kurtosis		-1.089		1.154
Vein depth POST	Intensitas rendah	Mean		2.1286	.06747	
			Lower	1.9828		
		95% Confidence Interval for	Bound			
		Mean	Upper	2.2743		
			Bound			
		5% Trimmed Mean		2.1317		
		Median		2.1000		
		Variance		.064		
		Std. Deviation		.25246		
		Minimum		1.60		
		Maximum		2.60		

Blood flow POST	Intensitas rendah	Range	1.00	
		Interquartile Range	.35	
		Skewness	-.141	.597
		Kurtosis	.534	1.154
		Mean	587.6050	27.11215
		Lower	529.0328	
		95% Confidence Interval for	Bound	
		Mean	Upper	646.1772
			Bound	
		5% Trimmed Mean	584.9000	
		Median	586.7150	
		Variance	10290.95	
			8	
		Std. Deviation	101.4443	
			6	
		Minimum	449.00	
		Maximum	774.90	
		Range	325.90	
		Interquartile Range	189.11	
		Skewness	.217	.597
		Kurtosis	-.711	1.154
		Mean	5.7143	.16167
Vein diameter POST	Intensitas rendah	Lower	5.3650	
		95% Confidence Interval for	Bound	
		Mean	Upper	6.0636
			Bound	
		5% Trimmed Mean	5.7103	
		Median	5.7500	
		Variance	.366	
		Std. Deviation	.60492	
		Minimum	4.70	
		Maximum	6.80	
		Range	2.10	
		Interquartile Range	1.00	
		Skewness	-.167	.597
		Kurtosis	-.617	1.154

T-Test**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Vein depth PRE	2.8643	14	.56787	.15177
	Vein depth POST	2.1286	14	.25246	.06747
Pair 2	Blow flow vol PRE	233.5543	14	63.51558	16.97525
	Blood flow POST	587.6050	14	101.44436	27.11215
Pair 3	Vein diameter PRE	3.5500	14	.65015	.17376
	Vein diameter POST	5.7143	14	.60492	.16167

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Vein depth PRE & Vein depth POST	14	-.475	.086
Pair 2	Blow flow vol PRE & Blood flow POST	14	-.249	.390
Pair 3	Vein diameter PRE & Vein diameter POST	14	.681	.007

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Vein depth PRE - Vein depth POST	.73571	.72282	.19318	.31837	1.15306	3.808	13	.002
	Blow flow vol PRE - Blood flow POST	-354.05071	132.43795	35.39553	-430.51811	-277.58332	-10.003	13	.000

Vein diameter	-2.16429	.50323	.13449	-2.45484	-1.87373	-	13	.000
Pair PRE -						16.092		
3 Vein diameter								
POST								

UJI NORMALITAS VARIABEL KEDALAMAN VENA, DIAMETER VENA DAN ALIRAN DARAH VENA KELOMPOK LATIHAN INTENSITAS SEDANG

Case Processing Summary

	Intensitas Latihan	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Vein depth pre-post	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Blood flow pre post	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Vein diameter pre post	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%

Descriptives

Intensitas Latihan		Statistic	Std. Error
Vein depth pre-post	Mean	-.4143	.07327
	Lower 95% Confidence Interval for Mean	-.5726	
	Upper 95% Confidence Interval for Mean	-.2560	
	5% Trimmed Mean	-.4214	
	Median	-.4000	
	Variance	.075	
	Std. Deviation	.27416	
	Minimum	-.90	
	Maximum	.20	
	Range	1.10	
	Interquartile Range	.33	
	Skewness	.200	.597
	Kurtosis	1.159	1.154

Blood flow pre post	Intensitas sedang	Mean	385.9143	28.94779
		Lower Bound	323.3764	
		95% Confidence Interval for Mean	448.4522	
		Upper Bound		
		5% Trimmed Mean	392.8937	
		Median	402.2000	
		Variance	11731.647	
		Std. Deviation	108.31273	
		Minimum	123.00	
		Maximum	523.20	
		Range	400.20	
		Interquartile Range	158.38	
		Skewness	-.909	.597
		Kurtosis	1.321	1.154
		Mean	2.5429	.26117
		Lower Bound	1.9786	
		95% Confidence Interval for Mean	3.1071	
		Upper Bound		
		5% Trimmed Mean	2.6310	
Vein diameter pre post	Intensitas sedang	Median	2.8000	
		Variance	.955	
		Std. Deviation	.97721	
		Minimum	-.10	
		Maximum	3.60	
		Range	3.70	
		Interquartile Range	.98	
		Skewness	-1.655	.597
		Kurtosis	3.291	1.154

Tests of Normality

	Intensitas Latihan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Vein depth pre-post	Intensitas sedang	.235	14	.035	.921	14	.229
Blood flow pre post	Intensitas sedang	.121	14	.200*	.931	14	.317

Vein diameter pre	Intensitas	.228	14	.048	.850	14	.022
post	sedang						

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

ANALISIS PAIRED T TEST KEDALAMAN VENA DAN ALIRAN DARAH VENA

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Vein depth PRE	2.8464	28	.58149	.10989
	Vein depth POST	2.2714	28	.41887	.07916
Pair 2	Blow flow vol PRE	229.4557	28	68.33700	12.91448
	Blood flow POST	599.4382	28	123.21626	23.28568

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Vein depth PRE & Vein depth POST	28	.409	.031
	Blow flow vol PRE & Blood flow POST	28	.326	.090

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Vein depth PRE - Vein depth POST	.57500	.56084	.10599	.35753	.79247	5.425	27	.000
	Blow flow vol PRE - Blood flow POST	-369.98250	119.82023	22.64390	-416.44393	-323.52107	-16.339	27	.000

ANALISIS WILCOXON TEST DIAMETER VENA KELOMPOK LATIHAN INTENSITAS SEDANG

Wilcoxon Signed Rank Test

Ranks

		N	Mean Rank	Sum of Ranks
Vein diameter POST - Vein diameter PRE	Negative Ranks	1 ^a	1.00	1.00
	Positive Ranks	27 ^b	15.00	405.00
	Ties	0 ^c		
	Total	28		

a. Vein diameter POST < Vein diameter PRE

b. Vein diameter POST > Vein diameter PRE

c. Vein diameter POST = Vein diameter PRE

Test Statistics^a

	Vein diameter POST - Vein diameter PRE
Z	-4.603 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Vein depth PRE	14	100.0%	0	0.0%	14	100.0%
Blood flow vol PRE	14	100.0%	0	0.0%	14	100.0%
Vein diameter PRE	14	100.0%	0	0.0%	14	100.0%
Vein depth POST	14	100.0%	0	0.0%	14	100.0%
Blood flow POST	14	100.0%	0	0.0%	14	100.0%
Vein diameter POST	14	100.0%	0	0.0%	14	100.0%

Descriptives

			Statistic	Std. Error
Vein depth PRE	Mean		2.8286	.16456
	95% Confidence Interval for Mean	Lower Bound	2.4731	
		Upper Bound	3.1841	
	5% Trimmed Mean		2.8206	
	Median		2.7500	
	Variance		.379	
	Std. Deviation		.61573	
	Minimum		1.80	
	Maximum		4.00	
	Range		2.20	
	Interquartile Range		.75	
	Skewness		.213	.597
	Kurtosis		-.250	1.154
	Mean		225.3571	20.05120
Blood flow vol PRE	95% Confidence Interval for Mean	Lower Bound	182.0392	
		Upper Bound	268.6751	
	5% Trimmed Mean		218.3968	
	Median		217.0000	
	Variance		5628.709	
	Std. Deviation		75.02472	
	Minimum		143.00	
	Maximum		433.00	
	Range		290.00	
	Interquartile Range		62.75	
	Skewness		1.816	.597
	Kurtosis		4.030	1.154
	Mean		3.1000	.20622
		Lower Bound	2.6545	
Vein diameter PRE				

		95% Confidence Interval for Mean	Upper Bound	3.5455	
		5% Trimmed Mean		3.0611	
		Median		2.9500	
		Variance		.595	
		Std. Deviation		.77161	
		Minimum		2.10	
		Maximum		4.80	
		Range		2.70	
		Interquartile Range		1.00	
		Skewness		.820	.597
		Kurtosis		.411	1.154
		Mean		2.4143	.13541
		95% Confidence Interval for Mean	Lower Bound	2.1217	
			Upper Bound	2.7068	
		5% Trimmed Mean		2.3881	
		Median		2.3500	
		Variance		.257	
	Vein depth POST	Std. Deviation		.50666	
		Minimum		1.70	
		Maximum		3.60	
		Range		1.90	
		Interquartile Range		.80	
		Skewness		.896	.597
		Kurtosis		.876	1.154
		Mean		611.2714	38.67429
		95% Confidence Interval for Mean	Lower Bound	527.7207	
			Upper Bound	694.8221	
		5% Trimmed Mean		606.7849	
		Median		580.6500	
		Variance		20939.807	
	Blood flow POST	Std. Deviation		144.70593	
		Minimum		382.00	
		Maximum		921.30	
		Range		539.30	
		Interquartile Range		244.23	
		Skewness		.446	.597
		Kurtosis		.090	1.154
		Mean		5.6429	.18597
		95% Confidence Interval for Mean	Lower Bound	5.2411	
			Upper Bound	6.0446	
		5% Trimmed Mean		5.6754	
		Median		5.7500	
	Vein diameter POST	Variance		.484	
		Std. Deviation		.69583	
		Minimum		4.10	
		Maximum		6.60	
		Range		2.50	
		Interquartile Range		.95	

Skewness	-1.010	.597
Kurtosis	.707	1.154

UJI BEDA 2 KELOMPOK LATIHAN INTENSITAS RENDAH DAN SEDANG

Intensitas Latihan

Case Processing Summary

	Intensitas Latihan	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Vein depth PRE	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Blow flow vol PRE	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Vein diameter PRE	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Vein depth POST	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Blood flow POST	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Vein diameter POST	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
Vein depth pre-post	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
blood flow pre post	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%
vein diameter pre post	Intensitas rendah	14	100.0%	0	0.0%	14	100.0%
	Intensitas sedang	14	100.0%	0	0.0%	14	100.0%

Tests of Normality

	Intensitas Latihan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Vein depth PRE	Intensitas rendah	.125	14	.200*	.924	14	.252
	Intensitas sedang	.130	14	.200*	.975	14	.939
Blow flow vol PRE	Intensitas rendah	.188	14	.197	.898	14	.107
	Intensitas sedang	.256	14	.014	.825	14	.010

Vein diameter PRE	Intensitas rendah	.127	14	.200*	.956	14	.654
	Intensitas sedang	.151	14	.200*	.942	14	.442
Vein depth POST	Intensitas rendah	.116	14	.200*	.978	14	.959
	Intensitas sedang	.147	14	.200*	.947	14	.510
Blood flow POST	Intensitas rendah	.115	14	.200*	.955	14	.640
	Intensitas sedang	.151	14	.200*	.966	14	.818
Vein diameter POST	Intensitas rendah	.167	14	.200*	.948	14	.537
	Intensitas sedang	.190	14	.185	.922	14	.236
Vein depth pre-post	Intensitas rendah	.196	14	.151	.882	14	.062
	Intensitas sedang	.235	14	.035	.921	14	.229
blood flow pre post	Intensitas rendah	.114	14	.200*	.963	14	.770
	Intensitas sedang	.121	14	.200*	.931	14	.317
vein diameter pre post	Intensitas rendah	.122	14	.200*	.941	14	.431
	Intensitas sedang	.228	14	.048	.850	14	.022

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

NPar Tests

Mann-Whitney Test

Ranks				
	Intensitas Latihan	N	Mean Rank	Sum of Ranks
vein diameter pre post	Intensitas rendah	14	11.54	161.50
	Intensitas sedang	14	17.46	244.50
	Total	28		
Blow flow vol PRE	Intensitas rendah	14	15.71	220.00
	Intensitas sedang	14	13.29	186.00
	Total	28		

Test Statistics^a

	vein diameter pre post	Blow flow vol PRE
Mann-Whitney U	56.500	81.000
Wilcoxon W	161.500	186.000
Z	-1.912	-.781
Asymp. Sig. (2-tailed)	.056	.435
Exact Sig. [2*(1-tailed Sig.)]	.056 ^b	.454 ^b

a. Grouping Variable: Intensitas Latihan

b. Not corrected for ties.

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Vein depth PRE	Equal variance s assumed	.144	.708	.160	26	.874	.03571	.22386	-.42444	.49587
	Equal variance s not assumed			.160	25.832	.874	.03571	.22386	-.42458	.49601
Vein diameter PRE	Equal variance s assumed	.103	.751	1.669	26	.107	.45000	.26967	-.10431	1.00431
	Equal variance s not assumed			1.669	25.273	.108	.45000	.26967	-.10508	1.00508
Vein depth POST	Equal variance s assumed	4.582	.042	-1.889	26	.070	-.28571	.15129	-.59669	.02527
	Equal variance s not assumed			-1.889	19.081	.074	-.28571	.15129	-.60228	.03085
Blood flow POST	Equal variance s assumed	2.049	.164	-.501	26	.621	-23.66643	47.23102	-120.75117	73.41832
	Equal variance s not assumed			-.501	23.292	.621	-23.66643	47.23102	-121.30349	73.97064
Vein diameter POST	Equal variance s assumed	.042	.838	.290	26	.774	.07143	.24642	-.43509	.57795
	Equal variance s not assumed			.290	25.507	.774	.07143	.24642	-.43557	.57843
blood flow pre post	Equal variance s assumed	.360	.554	-.697	26	.492	31.86357	45.72547	-125.85362	62.12647
	Equal variance s not assumed			-.697	25.015	.492	31.86357	45.72547	-126.03405	62.30691

Vein depth pre- post	Equal variance s assume d	8.16 9	.00 8	- 1.55 6	26	.132	-.32143	.20661	-.74612	.10327
	Equal variance s not assume d			- 1.55 6	16.66 5	.139	-.32143	.20661	-.75801	.11515