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Lampiran 1. Etik Penelitian

KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS HASANUDDIN
FAKULTAS KEDOKTERAN GIGI
RUMAH SAKIT GIGI DAN MULUT
KOMITE ETIK PENELITIAN KESEHATAN
Sekretariat : Lantai 2, Gedung Lama RSGM Unhas
JL.Kandea No. 5 Makassar
Contact Person: drg. Muhammad Ikbal, Sp.Pros/Nur Aedah AR TELP. 081342973011/081149191991

REKOMENDASI PERSETUJUAN ETIK
Nomor: 0056/TL.09/KEPK FKG-RSGM UNHAS/2023

Tanggal: 10 April 2023

Dengan ini menyatakan bahwa protokol dan dokumen yang berhubungan dengan protokol berikut ini telah mendapatkan persetujuan etik:

No. Protokol	UH 17120793	No Protokol Sponsor	
Peneliti Utama	drg. Laetitia Evangeline Ana Tukan	Sponsor	Pribadi
Judul Peneliti	Pengaruh Aplikasi *Gel Metformin* 1% Dan *Xenograft* Terhadap Kregenerasi Tulang Pada *Socket Pasca* Pencabutan Melalui Pembentukan *Woven Bone*		
No. Versi Protokol	1	Tanggal Versi	31 Maret 2023
No. Versi Protokol		Tanggal Versi	
Tempat Penelitian	1. Laboratorium Biofarmaka Fakultas Farmasi Universitas Hasanuddin 2. Klinik Hewan Doc pet 3. Laboratorium PA RSP Universitas Hasanuddin 4. Laboratorium Biokimia-Biomolekuler Fakultas Kedokteran Universitas Brawijaya		
Dokumen Lain			
Jenis Review	☐ Exempted ☒ Expedited ☐ Fullboard	Masa Berlaku 10 April 2023-10 April 2024	Frekuensi Review Lanjutan
Ketua Komisi Etik Penelitian	Nama: Dr. drg. Marhamah, M.Kes	Tanda Tangan	Tanggal
Sekretaris Komisi Etik Penelitian	Nama: drg. Muhammad Ikbal, Sp.Pros	Tanda Tangan	Tanggal

Kewajiban peneliti utama:
- Menyerahkan Amandemen Protokol untuk persetujuan sebelum diimplementasikan
- Menyerahkan laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan lapor SUSAR dalam 72 jam setelah peneliti utama menerima laporan.
- Menyerahkan laporan kemajuan (*progress report*) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah.
- Menyerahkan laporan akhir setelah penelitian berakhir.
- Melaporkan penyimpangan dari protokol yang disetujui (*protocol deviation/violation*)
- Mematuhi semua aturan yang berlak
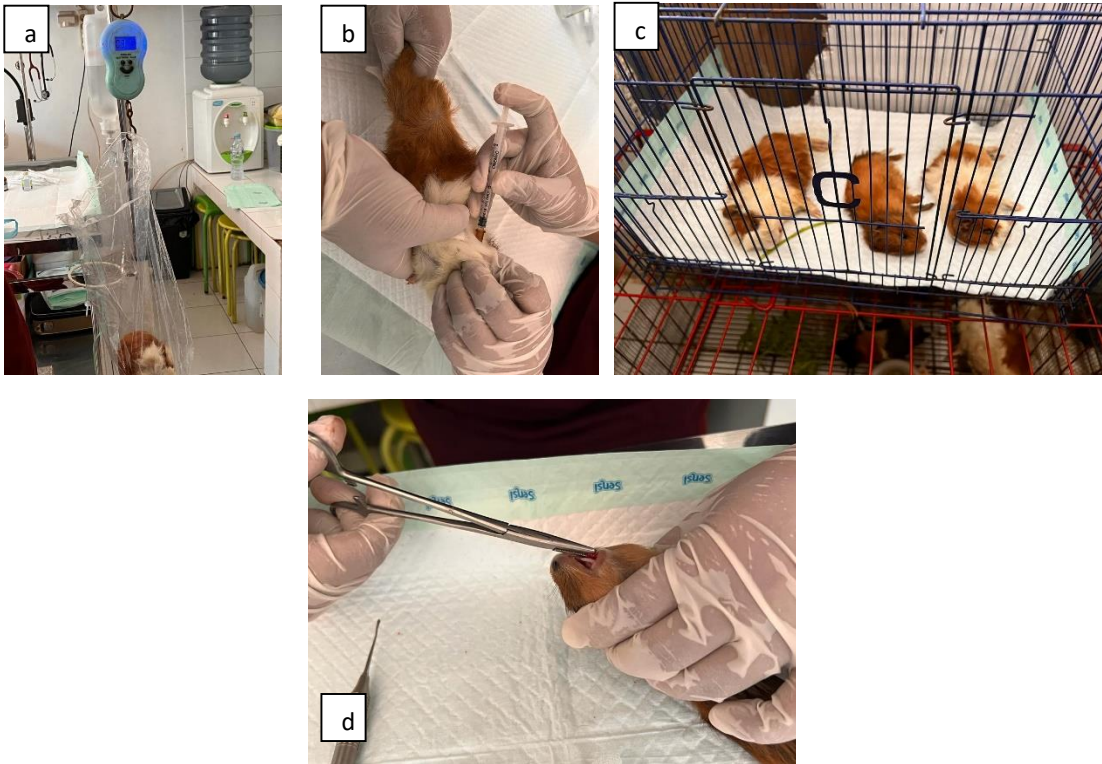
Gambar 8. Proses pembuatan Gel Metformin 1% (6 Juli 2023).(a).Bubuk metformin murni sebanyak 2 gr (b).Bahan lain : manitol, citric acid, methyl parabean, sodium citrate, sucrose, prophyl parabean, gellan gum (c). Proses pemanasan semua bahan sesuai takaran hingga mencapai konsistensi yang diinginkan

Gambar 9. Gel Metformin 1%

Gambar 10. Setelah marmut diadaptasikan selama 7 hari (30 Mei 2023), marmut dibagi menjadi 3 kelompok yaitu kelompok I (soket diisi dengan kombinasi gel metformin 1% dan xenograft), kelompok II (soket diisi xenograft/kontrol positif), dan kelompok III tanpa perlakuan (kontrol negatif).(a) Marmut ditimbang sesuai berat pada kriteria inklusi 250-300 gr (b) Anastesi dengan injeksi ketamin (c) Marmut yang sudah dianastesi (d) Pencabutan gigi insivus mandibula marmut
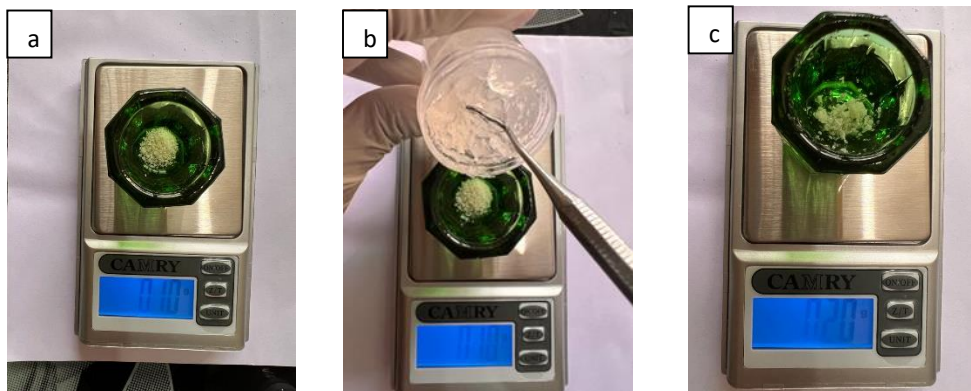
Gambar 11. Pencampuran gel metformin 1% dan xenograft dengan perbandingan 1:1. (a) Xenograft 0.10 gr (b) Gel metformin 1% 0.10 gr. (c) Kombinasi gel metformin 1% dan xenograft 0.20 gr
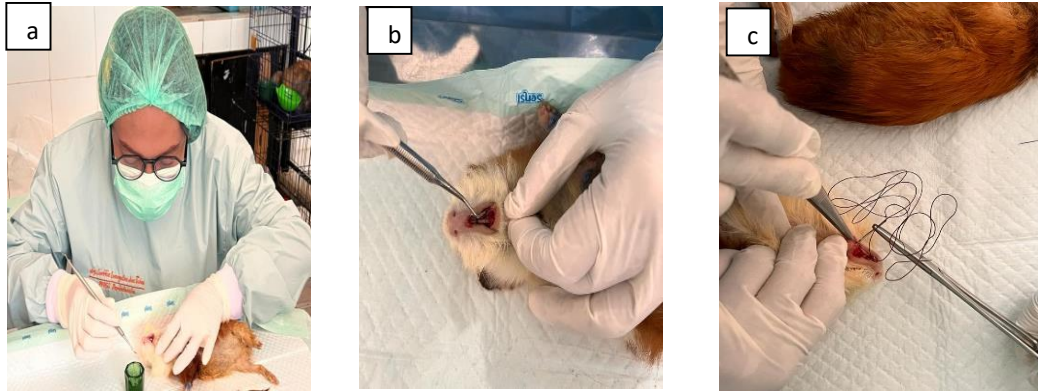
Gambar 12. (a) Proses memasukkan kombinasi gel meformin 1% dan xenograft kedalam soket bekas pencabutan gigi marmut. (b) Memasukkan bahan uji dengan bantuan excavator. (c) Penjahitan soket yang sudah diisi bahan uji dengan menggunakan benang black silk
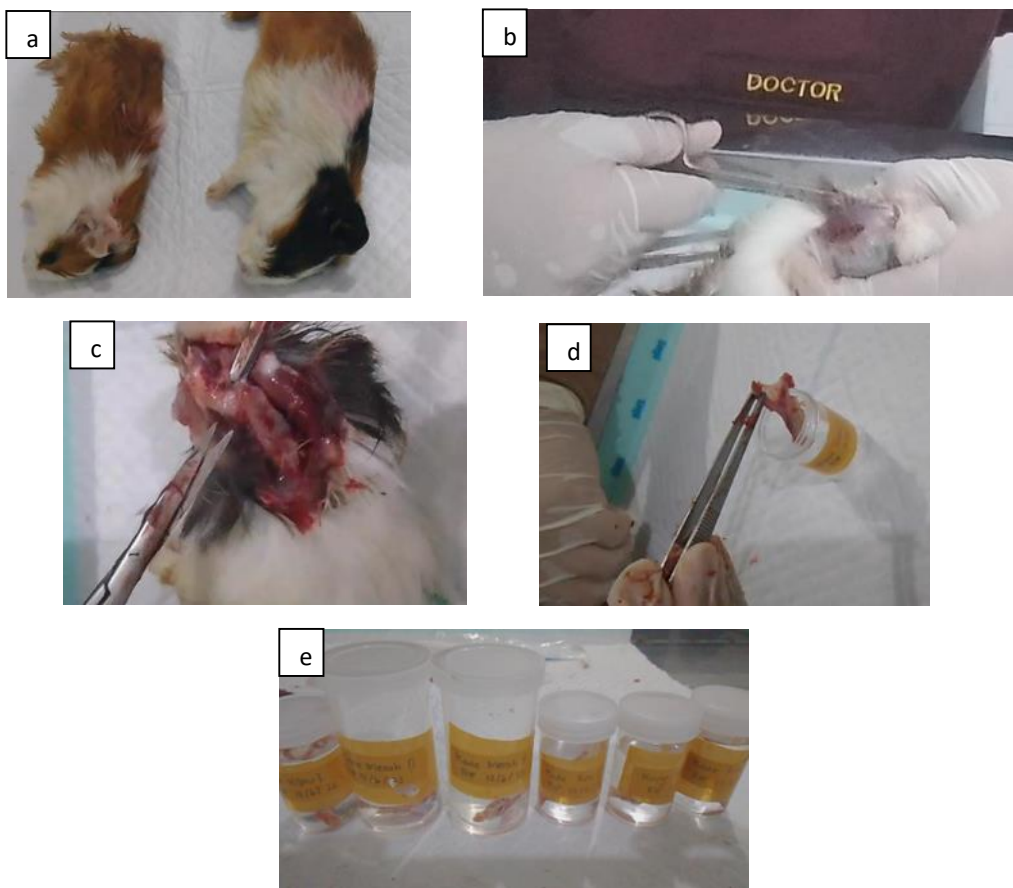
Gambar 13. (a-e) Setelah pencabutan gigi insisivus rahang bawah dan diberi perlakuan, marmut dikorbankan pada hari ke 7, 14, dan 28 untuk pengambilan jaringan pada rahang mandibula dan difiksasi menggunakan larutan buffer formalin 10% sebagai sampel penelitian
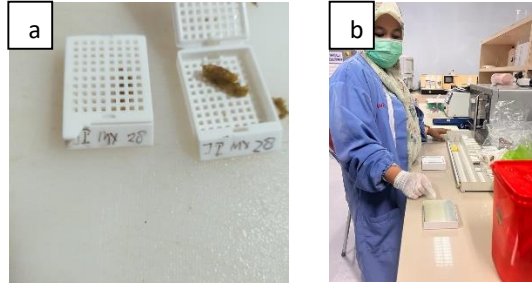
Gambar 14.(a) Sampel dibawa ke lab Patologi Anatomi untuk dilunakkan dan dibuat sampel preparatnya (12 juli 2023). (b) Slide preparat yang sudah siap kirim ke laboratorium Biokimia-Biomolekuler Universitas Brawijaya untuk dilakukan pemeriksaan histologis (28 juli 2023)

Lampiran 3. Output SPSS V.24

Uji Nornalitas data

Tests of Normality

	Kelompok	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Woven bone	Perlakuan	.207	9	.200[*]	.880	9	.158
	Kontrol Positif	.216	9	.200[*]	.886	9	.182
	Kontrol Negatif	.260	9	.080	.844	9	.064

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

a. Lilliefors Significance Correction

Uji Statistik

Hari ke-7

Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Perlakuan	3	31.2600	1.68935	.97535
	Kontrol Positif	3	22.7033	3.04507	1.75807

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.547	.500	4.256	4	.013	8.55667	2.01050	2.97462	14.13871
	Equal variances not assumed			4.256	3.125	.022	8.55667	2.01050	2.30030	14.81303

Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Perlakuan	3	31.2600	1.68935	.97535
	Kontrol Negatif	3	13.0267	1.38399	.79905

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Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.121	.745	14.461	4	.000	18.23333	1.26086	14.73261	21.73405
	Equal variances not assumed			14.461	3.851	.000	18.23333	1.26086	14.67850	21.78816

Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Kontrol Positif	3	22.7033	3.04507	1.75807
	Kontrol Negatif	3	13.0267	1.38399	.79905

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.912	.394	5.011	4	.007	9.67667	1.93114	4.31497	15.03836
	Equal variances not assumed			5.011	2.792	.018	9.67667	1.93114	3.26429	16.08904

Descriptives

Woven bone

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Perlakuan	3	31.2600	1.68935	.97535	27.0634	35.4566	29.43	32.76
Kontrol Positif	3	22.7033	3.04507	1.75807	15.1390	30.2677	19.67	25.76
Kontrol Negatif	3	13.0267	1.38399	.79905	9.5886	16.4647	11.87	14.56
Total	9	22.3300	8.11936	2.70645	16.0889	28.5711	11.87	32.76

ANOVA

Woven bone

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	499.309	2	249.654	53.338	.000
Within Groups	28.084	6	4.681		
Total	527.392	8			

Multiple Comparisons

Dependent Variable: Woven bone

	(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
LSD	Perlakuan	Kontrol Positif	8.55667*	1.76646	.003	4.2343	12.8790
		Kontrol Negatif	18.23333*	1.76646	.000	13.9110	22.5557
	Kontrol Positif	Perlakuan	-8.55667*	1.76646	.003	-12.8790	-4.2343
		Kontrol Negatif	9.67667*	1.76646	.002	5.3543	13.9990
	Kontrol Negatif	Perlakuan	-18.23333*	1.76646	.000	-22.5557	-13.9110
		Kontrol Positif	-9.67667*	1.76646	.002	-13.9990	-5.3543
Bonferroni	Perlakuan	Kontrol Positif	8.55667*	1.76646	.009	2.7495	14.3638
		Kontrol Negatif	18.23333*	1.76646	.000	12.4262	24.0405
	Kontrol Positif	Perlakuan	-8.55667*	1.76646	.009	-14.3638	-2.7495
		Kontrol Negatif	9.67667*	1.76646	.005	3.8695	15.4838
	Kontrol Negatif	Perlakuan	-18.23333*	1.76646	.000	-24.0405	-12.4262
		Kontrol Positif	-9.67667*	1.76646	.005	-15.4838	-3.8695

*. The mean difference is significant at the 0.05 level.

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Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Perlakuan	3	64.7167	8.51309	4.91503
	Kontrol Positif	3	35.3967	5.44685	3.14474

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.445	.541	5.025	4	.007	29.32000	5.83497	13.11951	45.52049
	Equal variances not assumed			5.025	3.402	.011	29.32000	5.83497	11.93331	46.70669

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Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Perlakuan	3	64.7167	8.51309	4.91503
	Kontrol Negatif	3	19.4067	6.18201	3.56918

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.229	.657	7.459	4	.002	45.31000	6.07426	28.44515	62.17485
	Equal variances not assumed			7.459	3.650	.002	45.31000	6.07426	27.78865	62.83135

Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Kontrol Positif	3	35.3967	5.44685	3.14474
	Kontrol Negatif	3	19.4067	6.18201	3.56918

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.056	.825	3.361	4	.028	15.99000	4.75694	2.78262	29.19738
	Equal variances not assumed			3.361	3.938	.029	15.99000	4.75694	2.69960	29.28040

Descriptives

Woven bone

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Perlakuan	3	64.7167	8.51309	4.91503	43.5690	85.8643	55.73	72.66
Kontrol Positif	3	35.3967	5.44685	3.14474	21.8660	48.9274	31.87	41.67
Kontrol Negatif	3	19.4067	6.18201	3.56918	4.0497	34.7636	14.41	26.32
Total	9	39.8400	20.76371	6.92124	23.8796	55.8004	14.41	72.66

ANOVA

Woven bone

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3168.339	2	1584.169	33.860	.001
Within Groups	280.716	6	46.786		
Total	3449.055	8			

Multiple Comparisons

Dependent Variable: Woven bone

	(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
LSD	Perlakuan	Kontrol Positif	29.32000*	5.58486	.002	15.6543	42.9857
		Kontrol Negatif	45.31000*	5.58486	.000	31.6443	58.9757
	Kontrol Positif	Perlakuan	-29.32000*	5.58486	.002	-42.9857	-15.6543
		Kontrol Negatif	15.99000*	5.58486	.029	2.3243	29.6557
	Kontrol Negatif	Perlakuan	-45.31000*	5.58486	.000	-58.9757	-31.6443
		Kontrol Positif	-15.99000*	5.58486	.029	-29.6557	-2.3243
Bonferroni	Perlakuan	Kontrol Positif	29.32000*	5.58486	.006	10.9600	47.6800
		Kontrol Negatif	45.31000*	5.58486	.001	26.9500	63.6700
	Kontrol Positif	Perlakuan	-29.32000*	5.58486	.006	-47.6800	-10.9600
		Kontrol Negatif	15.99000	5.58486	.086	-2.3700	34.3500
	Kontrol Negatif	Perlakuan	-45.31000*	5.58486	.001	-63.6700	-26.9500
		Kontrol Positif	-15.99000	5.58486	.086	-34.3500	2.3700

*. The mean difference is significant at the 0.05 level.

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Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Perlakuan	3	85.5633	5.26099	3.03743
	Kontrol Positif	3	61.6467	3.66443	2.11566

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.814	.418	6.461	4	.003	23.91667	3.70162	13.63931	34.19402
	Equal variances not assumed			6.461	3.571	.004	23.91667	3.70162	13.13340	34.69993

Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Perlakuan	3	85.5633	5.26099	3.03743
	Kontrol Negatif	3	44.4400	6.98689	4.03389

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.144	.724	8.144	4	.001	41.12333	5.04958	27.10346	55.14321
	Equal variances not assumed			8.144	3.716	.002	41.12333	5.04958	26.67096	55.57571

Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Woven bone	Kontrol Positif	3	61.6467	3.66443	2.11566
	Kontrol Negatif	3	44.4400	6.98689	4.03389

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Woven bone	Equal variances assumed	.897	.397	3.778	4	.019	17.20667	4.55502	4.55989	29.85344
	Equal variances not assumed			3.778	3.023	.032	17.20667	4.55502	2.77244	31.64090

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Descriptives

Woven bone

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Perlakuan	3	85.5633	5.26099	3.03743	72.4943	98.6324	79.56	89.37
Kontrol Positif	3	61.6467	3.66443	2.11566	52.5437	70.7496	59.31	65.87
Kontrol Negatif	3	44.4400	6.98689	4.03389	27.0836	61.7964	37.87	51.78
Total	9	63.8833	18.50355	6.16785	49.6602	78.1064	37.87	89.37

ANOVA

Woven bone

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2559.205	2	1279.602	42.690	.000
Within Groups	179.846	6	29.974		
Total	2739.050	8			

Multiple Comparisons

Dependent Variable: Woven bone

	(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
LSD	Perlakuan	Kontrol Positif	23.91667*	4.47022	.002	12.9784	34.8549
		Kontrol Negatif	41.12333*	4.47022	.000	30.1851	52.0616
	Kontrol Positif	Perlakuan	-23.91667*	4.47022	.002	-34.8549	-12.9784
		Kontrol Negatif	17.20667*	4.47022	.008	6.2684	28.1449
	Kontrol Negatif	Perlakuan	-41.12333*	4.47022	.000	-52.0616	-30.1851
		Kontrol Positif	-17.20667*	4.47022	.008	-28.1449	-6.2684
Bonferroni	Perlakuan	Kontrol Positif	23.91667*	4.47022	.005	9.2210	38.6123
		Kontrol Negatif	41.12333*	4.47022	.000	26.4277	55.8190
	Kontrol Positif	Perlakuan	-23.91667*	4.47022	.005	-38.6123	-9.2210
		Kontrol Negatif	17.20667*	4.47022	.025	2.5110	31.9023
	Kontrol Negatif	Perlakuan	-41.12333*	4.47022	.000	-55.8190	-26.4277
		Kontrol Positif	-17.20667*	4.47022	.025	-31.9023	-2.5110

*. The mean difference is significant at the 0.05 level.

LEMBAR PERBAIKAN UJIAN SEMINAR HASIL PPDGS PERIODONSIA

NAMA : Laetitia Evangeline Ana Tukan

NIM : J035202006

TANGGAL SEMINAR : 25 Oktober 2023

JUDUL : PENGARUH APLIKASI GEL METFORMIN 1% DAN XENOGRAFT TERHADAP PEMBENTUKAN *WOVEN BONE* PADA TINDAKAN *SOCKET PRESERVATION*

NO	NAMA DOSEN PENGUJI/PEMBIMBING	KOREKSI TESIS	PARAF
1.	Prof. Dr. A. Mardiana Adam, drg., M.S (Pembimbing I)	1. Perbaiki pembahasan menyertakan penelitian-penelitian sebelumnya yang mendukung hasil penelitian **Jawaban :** • Penulis sudah menambahkan penelitian-penelitian sebelumnya yang mendukung hasil penelitian	
2.	Dr. Asdar Gani, drg., M.Kes (Pembimbing II)	1. Perbaiki grafik pada tabel perbadingan berdasarkan waktu pengamatan menggunakan grafik garis **Jawaban :** • Penulis sudah menambahkan penelitian-penelitian sebelumnya yang mendukung hasil penelitian .	
3.	Prof. Dr. drg. Hasanuddin Thahir, M.s., Sp.Perio(K) (Penguji I)	1. Perbaiki citation pada penulisan daftar pustaka **Jawaban :** • Penulis sudah memperbaiki penulisan citation dan daftar pustaka	
4.	Prof. Dr. drg. Sri Oktawati, Sp.Perio(K) (Penguji II)	1. Perbaiki penulisan untuk bahan bovine hidroksiapatit, jangan ditulis merk (BATAN) dihilangkan. Perbaiki penulisan, tidak boleh ada kata sambung diawal kalimat. Paragraf uang terlalu panjang dijadikan paragraph baru **Jawaban :** • Penulis sudah memperbaiki penulisan bovine hidroksiapatit • Penulis sudah perbaiki untuk penulisan kata sambung. Penulis sudah memperbaiki paragraph yang terlalu panjang	
5.	Dr. Arni Irawaty Djais, drg., Sp.Perio(K) (Penguji III)	1. Perbaiki penulisan tanda baca **Jawaban :** • Penulis sudah memperbaiki penulisan, tanda baca	