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| **Table S1A. Effects of hemodialysis on total RBC oxylipins in the CKD patients before (Pre-HD) and at cessation (Post-HD) of hemodialysis** (n=12 each).  |
| **Amount ng/g** | **pre-HD Arterial** | **post-HD Arterial** | **p value, t test(# paired Wilcoxon test)** |
| **Panel A: Arterial blood.**  |
| **LOX metabolites** |  |  |  |
| 5-HETE | 192.57 ±25.35 | 207.64 ±48.27 | 0.388 # |
| 8-HETE | 56.64 ±11.68 | 63.03 ±12.45 | 0.239 # |
| 9-HETE | 154.21 ±19.56 | 171.28 ±40.78 | 0.347 # |
| 11-HETE | 178.41 ±41.70 | 184.55 ±66.18 | 0.638 # |
| 12-HETE | 413.36 ±143.96 | 610.90 ±502.51 | 0.388 # |
| 15-HETE | 328.57 ±59.64 | 337.74 ±92.64 | 0.754 # |
| 4-HDHA | 115.75 ±40.87 | 113.09 ±53.8986 | 0.814 # |
| 7-HDHA | 24.96 ±8.22 | 28.55 ±8.34 | 0.183 |
| 8-HDHA | 29.24 ±9.97 | 33.09 ±12.20 | 0.134 |
| 10-HDHA | 20.09 ±6.25 | 21.58 ±6.45 | 0.433 # |
| 11-HDHA | 37.79 ±24.86 | 34.92 ±28.61 | 0.875 # |
| 13-HDHA | 45.76 ±17.61 | 46.84 ±22.55 | 0.753 |
| 14-HDHA | 45.92 ±18.73 | 55.82 ±33.11 | 0.583 |
| 16-HDHA | 58.53 ±27.04 | 56.87 ±28.82 | 0.937 # |
| 17-HDHA | 71.77 ±30.09 | 70.20 ±31.59 | 0.937 # |
| 20-HDHA | 143.35 ±63.29 | 142.83 ±66.65 | 0.695 # |
| 5-HEPE | 14.85 ±6.92 | 15.04 ±5.91 | 0.875 # |
| 8-HEPE | 2.09±0.85 | 2.56 ±0.89 | 0.071 # |
| 9-HEPE | 5.35 ±2.36 | 6.44 ±2.45 | 0.131 # |
| 11-HEPE | 21.94 ±16.25 | 21.15 ±16.16 | 0.906 # |
| 12-HEPE | 38.22 ±21.81 | 49.19 ±44.12 | 0.875 # |
| 15-HEPE | 6.88 ±3.40 | 7.62 ±2.84 | 0.182 # |
| 18-HEPE | 20.23 ±7.43 | 20.58 ±7.48 | 0.814 # |
| **CYP ω/(ω−1) metabolites** |  |  |  |
| 16-HETE | 11.35 ±4.51 | 11.13 ±5.28 | 0.814 # |
| 17-HETE | 0.23 ±0.08 | 0.23 ±0.07 | 0.844 # |
| 18-HETE | 0.64 ±0.26 | 0.68 ±0.26 | 0.529 # |
| 19-HETE | 0.32 ±0.11 | 0.35 ±0.17 | 0.906 # |
| 20-HETE | 0.589 ±0.138 | 0.64 ±0.15 | 0.209 # |
| 9-HODE | 95.46 ±20.97 | 112.39 ±38.96 | 0.308 # |
| 13-HODE | 108.45 ±26.10 | 131.67 ±51.38 | 0.209 # |
| 22-HDHA | 0.26 ±0.14 | 0.25 ±0.13 | 0.666 |
| 20-HEPE | 0.26 ±0.14 | 0.05 ±0.07 | 0.786 # |
| **CYP epoxy-metabolites** |  |  |  |
| 5,6-EET | 62.22 ±68.30 | 91.36 ±99.99 | 1 # |
| 8,9-EET | 62.07 ±16.10 | 76.50 ±22.04 | 0.136 # |
| 11,12-EET | 69.88 ±14.41 | 84.18 ±25.51 | 0.209 # |
| 14,15-EET | 92.07 ±25.43 | 109.32 ±40.86 | 0.308 # |
| 5,6-DHET | 2.57 ±0.60 | 2.68 ±0.86 | 0.754 # |
| 8,9-DHET | 3.44 ±1.64 | 3.48 ±1.62 | 0.308 # |
| 11,12-DHET | 1.66 ±0.64 | 1.76 ±0.48 | 0.182 # |
| 14,15-DHET | 2.29 ±0.35 | 2.35 ±0.35 | 0.432 # |
| 9,10-EpOME | 37.19 ±15.89 | 54.47 ±28.71 | 0.071 # |
| 12,13-EpOME | 39.69 ±12.91 | 55.17 ±21.02 | 0.041 # |
| 9,10-DiHOME | 1.98 ±1.28 | 2.72 ±2.06 | 0.374 # |
| 12,13-DiHOME | 3.49 ±1.35 | 4.50 ±2.83 | 0.556 # |
| 7,8-EDP | 39.28 ±19.86 | 44.29 ±16.39 | 0.384 |
| 10,11-EDP | 18.95 ±8.56 | 25.07 ±9.45 | 0.081 |
| 13,14-EDP | 17.88 ±9.99 | 18.31 ±7.98 | 0.912 |
| 16,17-EDP | 32.72 ±16.513 | 27.36 ±14.54 | 0.389 |
| 19,20-EDP | 23.01 ±10.21 | 32.01 ±11.74 | 0.065 |
| 7,8-DiHDPA | 1.15 ±0.50 | 1.32 ±0.71 | 0.409 |
| 10,11-DiHDPA | 0.76 ±0.17 | 0.75 ±0.19 | 0.937 # |
| 13,14-DiHDPA | 0.85 ±0.33 | 0.87 ±0.39 | 0.863 |
| 16,17-DiHDPA | 0.48 ±0.16 | 0.48 ±0.19 | 0.914 |
| 19,20-DiHDPA | 1.19 ±0.43 | 1.28 ±0.35 | 0.445 |
| 5,6-EEQ | ns | ns | ns |
| 8,9-EEQ | 3.10 ±2.48 | 4.22 ±2.60 | 0.06 # |
| 11,12-EEQ | 3.64 ±2.59 | 4.89 ±1.72 | 0.05 # |
| 14,15-EEQ | 2.83 ±1.68 | 3.78 ±1.71 | 0.116 |
| 17,18-EEQ | 4.74 ±4.03 | 7.42 ±6.13 | 0.099 # |
| 5,6-DiHETE | 2.61 ±0.98 | 2.21 ±0.73 | 0.019 # |
| 8,9-DiHETE | 0.22 ±0.17 | 0.21 ±0.09 | 0.824 # |
| 11,12-DiHETE | 3.80 ±2.55 | 5.30 ±2.66 | 0.247 |
| 14,15-DiHETE | 0.13 ±0.10 | 0.05 ±0.07 | 0.125 # |
| 17,18-DiHETE | 0.44 ±0.17 | 0.43 ±0.16 | 0.529 # |
| Notes: Mean+SD. |

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| **Table S1B. Effects of hemodialysis on total RBC oxylipins in the CKD patients before (Pre-HD) and at cessation (Post-HD) of hemodialysis** (n=12 each). |
| **Amount ng/g** | **pre-HD Venous**  | **post-HD Venous**  | **p value, t test(# paired Wilcoxon test)** |
| **Panel B: Venous blood.** |
| **LOX metabolites** |  |  |  |
| **5-HETE** | **198.56 ±32.71** | **173.93 ±31.81** | **0.015** |
| 8-HETE | 56.70 ±9.36 | 56.56 ±9.36 | 0.961 |
| **9-HETE** | **159.42 ±18.96** | **136.62 ±24.32** | **0.004** |
| 11-HETE | 179.03 ±46.16 | 171.73 ±57.79 | 0.361 |
| 12-HETE | 469.21 ±325.75 | 352.44 ±141.85 | 0.084 # |
| 15-HETE | 331.87 ±65.68 | 306.33 ±85.33 | 0.063 |
| **16-HETE** | **14.09 ±5.15** | **10.90 ±4.83** | **0.01 #** |
| **17-HETE** | **0.26 ±0.07** | **0.21 ±0.06** | **0.001** |
| **19-HETE** | **0.67 ±0.20** | **0.63 ±0.23** | **0.008 #** |
| **20-HETE** | **0.35 ±0.14** | **0.28 ±0.10** | **0.007 #** |
| 4-HDHA | 113.58 ±38.50 | 104.4464 ±43.3149 | 0.101 |
| **7-HDHA** | **25.15 ±4.15** | **22.08 ±5.51** | **0.023** |
| 8-HDHA | 27.28 ±9.25 | 26.17 ±10.39 | 0.302 |
| 10-HDHA | 20.06 ±5.02 | 18.34 ±6.65 | 0.078 |
| 11-HDHA | 38.53 ±21.33 | 35.36 ±22.06 | 0.143 |
| **13-HDHA** | **47.91 ±19.64** | **43.02 ±21.02** | **0.038** |
| **14-HDHA** | **48.43 ±15.56** | **37.95 ±10.82** | **0.018** |
| 16-HDHA | 59.80±25.79 | 54.85 ±28.15 | 0.112 |
| 17-HDHA | 70.33 ±27.14 | 64.84 ±30.06 | 0.058 |
| 20-HDHA | 141.64 ±55.32 | 130.52 ±60.98 | 0.086 |
| **8-HEPE** | **2.20 ±0.60** | **1.85 ±0.72** | **0.04** |
| 5-HEPE | 13.80 ±5.68 | 12.94 ±5.66 | 0.177 |
| 9-HEPE | 19.27 ±6.61 | 17.87 ±8.10 | 0.103 |
| 11-HEPE | 23.29 ±13.88 | 20.49 ±13.96 | 0.267 |
| **12-HEPE** | **42.08 ±19.71** | **24.26 ±9.95** | **0.004** |
| **15-HEPE** | **7.37 ±2.93** | **6.16 ±3.07** | **0.015** |
| 18-HEPE | 19.27 ±6.61 | 17.87 ±8.10 | 0.136 |
| **CYP ω/(ω−1) metabolites** |  |  |  |
| 18-HETE | 0.67 ±0.20 | 0.63 ±0.23 | 0.45 |
| 9-HODE | 105.22 ±15.95 | 94.99 ±25.11 | 0.14  |
| 13-HODE | 117.85 ±16.26 | 103.24 ±31.34 | 0.076 |
| 22-HDHA | 0.33 ±0.23 | 0.23 ±0.14 | 0.091 # |
| 20-HEPE | 0.10 ±0.17 | 0.05 ±0.10 | 0.785 # |
| **CYP epoxy-metabolites** |  |  |  |
| 5,6-EET | 69.46 ±65.90 | 56.52 ±63.89 | 0.084 # |
| 8,9-EET | 65.90 ±13.95 | 63.37 ±14.10 | 0.655 |
| 11,12-EET | 75.19 ±19.91 | 69.94 ±15.93 | 0.54 |
| 14,15-EET | 103.57 ±31.77 | 94.90 ±24.38 | 0.53 # |
| **5,6-DHET** | **2.84 ±0.76** | **2.24 ±0.50** | **0.028 #** |
| **8,9-DHET** | **3.66 ±1.67** | **3.03 ±1.50** | **0.017 #** |
| 11,12-DHET | 1.66 ±0.63 | 1.49 ±0.47 | 0.224 # |
| 14,15-DHET | 2.29 ±0.38 | 2.14 ±0.27 | 0.196 |
| 9,10-EpOME | 40.17 ±11.39 | 40.01 ±17.56 | 0.957 |
| 12,13-EpOME | 43.09 ±8.73 | 43.09 ±13.08 | 1 |
| 9,10-DiHOME | 2.13 ±1.43 | 2.36 ±1.93 | 0.906 # |
| **12,13-DiHOME** | **3.36 ±1.56** | **4.57 ±2.95** | **0.034 #** |
| 7,8-EDP | 40.07 ±18.50 | 39.12 ±13.12 | 0.583 # |
| 10,11-EDP | 20.22 ±7.14 | 18.32 ±5.64 | 0.429 |
| 13,14-EDP | 19.76 ±10.12 | 14.44 ±4.46 | 0.121 |
| **16,17-EDP** | **36.67 ±15.08** | **21.28 ±9.22** | **0.016** |
| 19,20-EDP | 25.17 ±10.13 | 22.38 ±6.48 | 0.695 # |
| 7,8-DiHDPA | 1.29 ±0.47 | 1.22 ±0.48 | 0.575 |
| 10,11-DiHDPA | 0.74 ±0.14 | 0.70 ±0.17 | 0.468 |
| 13,14-DiHDPA | 0.77 ±0.21 | 0.89 ±0.38 | 0.209 # |
| 16,17-DiHDPA | 0.49 ±0.12 | 0.479 ±0.11 | 0.25 |
| 19,20-DiHDPA | 1.09 ±0.28 | 1.05 ±0.25 | 0.617 |
| 5,6-EEQ | ns | ns |  |
| 8,9-EEQ | 2.69 ±1.17 | 2.76 ±1.40 | 0.969 # |
| 11,12-EEQ | 3.68 ±2.02 | 3.58 ±1.29 | 0.638 # |
| 14,15-EEQ | 2.75 ±1.41 | 2.54 ±0.95 | 0.754 # |
| 17,18-EEQ | 4.09 ±2.08 | 4.67 ±3.85 | 0.583 # |
| 5,6-DiHETE | 1.71 ±0.46 | 2.09 ±0.49 | 0.06 |
| 8,9-DiHETE | 0.17 ±0.06 | 0.19 ±0.05 | 0.232 |
| 11,12-DiHETE | 3.56 ±1.68 | 4.70±3.49 | 0.387 |
| 14,15-DiHETE | 0.11 ±0.04 | 0.05 ±0.10 | 0.355 |
| 17,18-DiHETE | 0.39 ±0.11 | 0.45 ±0.22 | 0.284 |
| Notes: Mean+SD. |

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| **Table S2. Effects of hemodialysis on total RBC oxylipins and their ratios in the CKD patients before (Pre-HD) and at cessation (Post-HD) of hemodialysis** (n=12 each).  |
| **Amount ng/g** | **pre-HD Arterial** | **post-HD Arterial** | **p value, t test(# paired Wilcoxon test)** | **pre-HD Venous**  | **post-HD Venous**  | **p value, t test(# paired Wilcoxon test)** |
|  | **Panel A: Arterial blood.** | **Panel B: Venous blood.** |
| 9,10-EpOME + 9,10-DiHOME | 64.79 ±67.79  | 94.04 ±99.69  | 0.085 | 72.30 ±68.41  | 58.76 ±63.49  | 0.937 # |
| 12,13-EpOME + 12,13-DiHOME | **65.52 ±15.88**  | **79.98 ±22.55**  | **0.041 #** | 69.56 ±14.81  | 66.40 ±13.53  | 0.766 # |
| 5,6-EET + 5,6-DHET | 71.55 ±14.37  | 85.94 ±25.69  | 1 # | 76.85 ±20.73  | 71.43 ±15.93  | 0.06 # |
| 8,9-EET + 8,9-DHET | 94.36 ±25.30  | 111.66 ±40.97  | 0.12 | 105.86 ±33.03  | 97.05 ±24.40 | 0.575 |
| 11,12-EET + 11,12-DHET | 43.18 ±13.43  | 59.67 ±23.23  | 0.209 # | 46.45 ±9.57  | 47.66 ±15.27  | 0.527 |
| 14,15-EET + 14,15-DHET | 39.16 ±16.90  | 57.19 ±30.62  | 0.243 | 42.30 ±13.10 | 42.38 ±19.35  | 0.53 # |
| 5,6-EEQ + 5,6-DiHETE | **2.62 ±0.99**  | **2.22 ±0.73**  | **0.019 #** | 1.71 ±0.48  | 2.10 ±0.48  | 0.06 |
| 8,9-EEQ + 8,9-DiHETE | 3.31 ±2.64  | 4.43 ±2.67  | 0.06 # | 2.87 ±1.25  | 2.95 ±1.43  | 0.937 # |
| 11,12-EEQ + 11,12-DiHETE | 7.43 ±4.77  | 10.19 ±3.67  | 0.161 | 7.24 ±3.22  | 8.29 ±3.82  | 0.543 |
| 14,15-EEQ + 14,15-DiHETE | 2.96 ±1.75  | 3.94 ±1.76  | 0.109 | 2.87 ±1.49  | 2.66 ±0.99  | 0.814 # |
| 17,18-EEQ + 17,18-DiHETE | 5.19 ±4.14  | 7.86 ±6.18  | 0.099 # | 4.48 ±2.19 | 5.12 ±3.80 | 0.583 # |
| 7,8-EDP + 7,8-DiHDPA | 40.43 ±20.07 | 45.61 ±16.82  | 0.371 | 41.36 ±19.51 | 40.35 ±13.32  | 0.841 |
| 10,11-EDP + 10,11-DiHDPA | 19.71 ±8.67  | 25.82 ±9.47  | 0.08 | 20.96 ±7.45  | 19.03 ±5.58  | 0.416 |
| 13,14-EDP + 13,14-DiHDPA | 18.73 ±10.27  | 19.18 ±8.02  | 0.908 | 20.53 ±10.58 | 15.32 ±4.45  | 0.127 |
| 16,17-EDP + 16,17-DiHDPA | 33.20 ±16.60  | 27.83 ±14.51  | 0.388 | **37.17 ±15.81**  | **21.75 ±9.18**  | **0.016** |
| 19,20-EDP + 19,20-DiHDPA | 24.20 ±10.57  | 33.29 ±11.81  | 0.065 | 26.26 ±10.68  | 23.43 ±6.57  | 0.695 # |
| Ratio (9,10-DiHOME+12,13-DiHOME)/(9,10-EpOME+12,13-EpOME) | 0.08 ±0.04  | 0.06 ±0.02  | 0.182 # | 0.06 ±0.03  | 0.08 ±0.03  | 0.13 |
| Ratio(5,6-DHET+8,9-DHET+11,12-DHET+14,15-DHET)/(5,6-EET+8,9-EET +11,12 EET +14,15-EET) | 0.04 ±0.02 | 0.03 ±0.01  | 0.583 # | 0.04 ±0.01 | 0.03 ±0.01 | 0.736 |
| Ratio(5,6-DiHETE+8,9-DiHETE+11,12-DiHETE+14,15-DiHETE+17,18-DiHETE)/(5,6-EEQ+8,9-EEQ+11,12-EEQ+14,15-EEQ+17,18-EEQ) | 0.57 ±0.19  | 0.45 ±0.19  | 0.105 | 0.48 ±0.20  | 0.67 ±0.47  | 0.48 # |
| Ratio(7,8-DiHDPA+10,11-DiHDPA+13,14-DiHDPA+16,17-DiHDPA+19,20-DiHDPA)/(7,8-EDP+10,11-EDP+13,14-EDP+16,17-EDP+19,20-EDP) | 0.04 ±0.02  | 0.03 ±0.01  | 0.814 # | 0.03 ±0.01 | 0.04 ±0.02  | 0.197 |
| 9,10-DiHOME/9,10-EpOME | 0.05 ±0.03  | 0.05 ±0.02  | 0.179 | 0.05 ±0.02  | 0.05 ±0.02  | 0.603 |
| 12,13-DiHOME/12,13-EpOME | 0.10 ±0.05  | 0.08 ±0.03  | 0.212 | 0.08 ±0.03  | 0.102 ±0.05 | 0.06 |
| 5,6-DHET/5,6-EET | 0.11 ±0.10  | 0.13 ±0.11  | 0.099 # | 0.09 ±0.07 | 0.11 ±0.10  | 0.695 # |
| 8,9-DHET/8,9-EET | 0.06 ±0.04 | 0.05 ±0.02  | 0.48 # | 0.06 ±0.03  | 0.05 ±0.03  | 0.53 # |
| 11,12-DHET/11,12-EET | 0.031 ±0.01  | 0.02 ±0.01  | 0.48 # | 0.02 ±0.01 | 0.02 ±0.01  | 0.653 |
| 14,15-DHET/14,15-EET | 0.03 ±0.01  | 0.02 ±0.01  | 0.361 | 0.02 ±0.01  | 0.02 ±0.01 | 0.728 |
| 5,6-DiHETE/5,6-EEQ | **1940.29 ±1425.66**  | **1242.35±1220.11**  | **0.016** | **1107.48 ±699.94** | **1551.99±1013.06**  | **0.026** |
| 8,9-DiHETE/8,9-EEQ | 0.08 ±0.03  | 0.06 ±0.02  | 0.087 | 0.07 ±0.02 | 0.08 ±0.03  | 0.269 |
| 11,12-DiHETE/11,12-EEQ | 1.15 ±0.97  | 1.14 ±0.69  | 0.814 # | 1.17 ±0.98  | 1.44 ±1.26  | 0.695 # |
| 14,15-DiHETE/14,15-EEQ | 0.05 ±0.02  | 0.05 ±0.02  | 0.619 | 0.05 ±0.02 | 0.05 ±0.02  | 0.961 |
| 17,18-DiHETE/17,18-EEQ | 0.14 ±0.08  | 0.09 ±0.06  | 0.116 | 0.12 ±0.06  | 0.14 ±0.08  | 0.273 |
| 7,8-DiHDPA/7,8-EDP | 0.04 ±0.02 | 0.03 ±0.01  | 0.48 # | 0.04 ±0.01  | 0.03 ±0.02  | 0.875 # |
| 10,11-DiHDPA/10,11-EDP | 0.0477 ±0.0250  | 0.0342 ±0.0149  | 0.117 # | 0.0421 ±0.0202  | 0.0427 ±0.0179  | 0.929 |
| 13,14-DiHDPA/13,14-EDP | 0.06 ±0.03  | 0.06 ±0.03  | 0.875 # | 0.05 ±0.03  | 0.07 ±0.05  | 0.158 # |
| 16,17-DiHDPA/16,17-EDP | 0.02 ±0.02  | 0.03 ±0.02  | 0.308 # | **0.02 ±0.01**  | **0.03 ±0.02**  | **0.034 #** |
| 19,20-DiHDPA/19,20-EDP | 0.06±0.02  | 0.04 ±0.01  | 0.347 # | 0.05 ±0.02 | 0.05 ±0.01  | 0.739 |
| Notes: Mean+SD. |