Supplementary Table S1. Full baseline characteristics in matched children with and without LVH

	LVH group (n=63)	Non-LVH group (n=63)	P-value
Ambulatory Blood Pressure (ABPM)			
24-h Mean SBP (mmHg)	128.51 ± 7.68	126.50 ± 6.23	0.086
24-h Mean DBP (mmHg)	75.00 (70.00–79.45)	73.00 (71.00–77.00)	0.173
Daytime SBP (mmHg)	131.94 ± 9.11	129.18 ± 6.91	0.046
Daytime DBP (mmHg)	77.80 (70.42–81.00)	76.00 (73.00–79.50)	0.693
Nighttime SBP (mmHg)	122.96 ± 8.12	122.05 ± 6.93	0.478
Nighttime DBP (mmHg)	71.93 ± 7.19	69.80 ± 6.48	0.063
SBP dipping rate (%)	6.64 ± 5.84	5.66 ± 4.10	0.224
DBP dipping rate (%)	6.25 ± 7.28	6.70 ± 5.58	0.674
Clinical Characteristics			
Hypertension grade, n (%)			0.005
Grade 1	33 (52.4%)	49 (77.8%)	
Grade 2	30 (47.6%)	14 (22.2%)	
Parental history of hypertension, n (%)	33 (52.4%)	19 (30.2%)	0.016
Maternal gestational hypertension, n (%)	7 (11.1%)	5 (7.9%)	0.774
Hyperuricemia, n (%)	45 (71.4%)	48 (76.2%)	0.678
Hypertriglyceridemia, n (%)	21 (33.3%)	24 (38.1%)	0.701
OSAS, n (%)	51 (81.0%)	36 (57.1%)	0.001
Diabetes mellitus, n (%)	8 (12.7%)	8 (12.7%)	1.000
Metabolic syndrome, n (%)	39 (61.9%)	43 (68.3%)	0.585
WBC ($\times 10^9$ /L)	7.58 ± 1.19	7.37 ± 1.27	0.389
RBC ($\times 10^{12}$/L)	5.14 ± 0.41	5.18 ± 0.53	0.598
ANC ($\times 10^9$ /L)	4.58 ± 1.19	4.34 ± 1.15	0.197
Hb (g/L)	144.00 (136.13 − 152.00)	140.00 (127.50 − 154.97)	0.333
Hct (%)	42.67 ± 3.17	42.68 ± 4.78	0.985
MCV (fL)	82.82 (81.12 – 85.65)	82.90 (79.17 – 85.85)	0.146
MCH (pg)	28.20 (27.20–29.10)	28.07 (26.45–29.05)	0.121
MCHC (g/L)	340.99 (328.00–351.65)	334.19 (325.79–343.75)	0.015
RDW (%)	12.71 (12.20–13.37)	13.00 (12.40–13.84)	0.202
PLT ($\times 10^9$ /L)	305.00 ± 85.96	332.29 ± 56.76	0.027
MPV (fL)	10.44 ± 0.89	9.93 ± 0.78	0.002
PDW (fL)	12.22 ± 1.44	11.13 ± 1.18	<0.001
PCT (%)	0.33 ± 0.08	0.33 ± 0.06	0.969
ALC ($\times 10^9$ /L)	2.89 ± 0.76	2.70 ± 0.66	0.131

NEU (%)	54.84 ± 7.83	56.01 ± 7.81	0.394
LYM (%)	34.50 ± 8.28	35.11 ± 7.38	0.651
PLR	117.65 ± 33.11	121.93 ± 31.72	0.456
NLR	1.71 ± 0.56	1.56 ± 0.54	0.142
ESR (mm/h)	10.35 ± 4.29	9.06 ± 4.47	0.079
Homocysteine (μmol/L)	9.77 (8.36–14.57)	10.57 (8.39–19.43)	0.091
Potassium (mmol/L)	4.28 ± 0.36	4.19 ± 0.33	0.206
Sodium (mmol/L)	139.76 ± 1.99	139.44 ± 2.04	0.356
Total cholesterol (mmol/L)	4.27 ± 0.92	4.05 ± 0.77	0.179
Uric acid (μmol/L)	489.88 ± 136.53	485.59 ± 90.64	0.816
Glucose (mmol/L)	4.81 (4.56–5.15)	4.93 (4.50–5.44)	0.477
Total calcium (mmol/L)	2.38 ± 0.13	2.40 ± 0.13	0.417
Triglycerides (mmol/L)	1.37 (1.11–1.90)	1.23 (0.96–1.54)	0.050
HDL-C (mmol/L)	1.05 ± 0.20	1.08 ± 0.22	0.470
LDL-C (mmol/L)	2.63 ± 0.70	2.51 ± 0.56	0.266
HOMA-IR	7.41 (4.43–10.89)	6.62 (5.03–8.92)	0.913

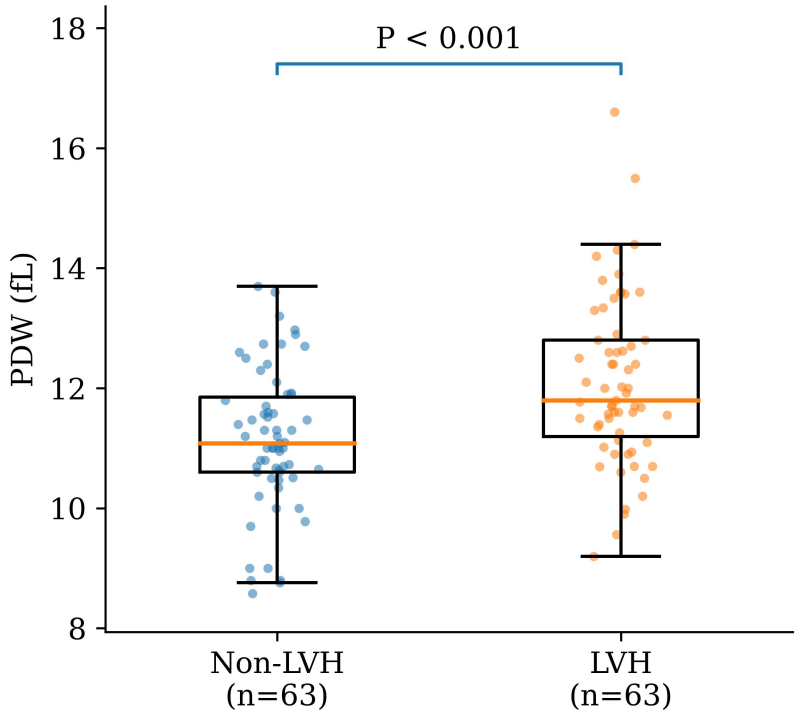
Data are presented as mean ±SD or median (interquartile range) for continuous variables, and as frequencies (percentages) for categorical variables. Comparisons were performed using paired t-tests or Wilcoxon signed-rank tests for continuous variables, and McNemar's tests for categorical variables, accounting for the matched study design.Significant P-values are shown in bold. Abbreviations: SBP, systolic blood pressure; DBP, diastolic blood pressure; OSAS, obstructive sleep apnea syndrome; MCHC, mean corpuscular hemoglobin concentration; PLT, platelet count; MPV, mean platelet volume; PDW, platelet distribution width; ESR, erythrocyte sedimentation rate; HOMA-IR, homeostasis model assessment of insulin resistance.

Supplementary Table S2. Discriminatory performance of platelet distribution width (PDW) alone for predicting LVH in matched participants

Marker	AUC (95% CI)	Optimal cutoff (fL)	Sensitivity	Specificity
PDW	0.696(0.603 – 0.788)	11.500	0.698	0.651

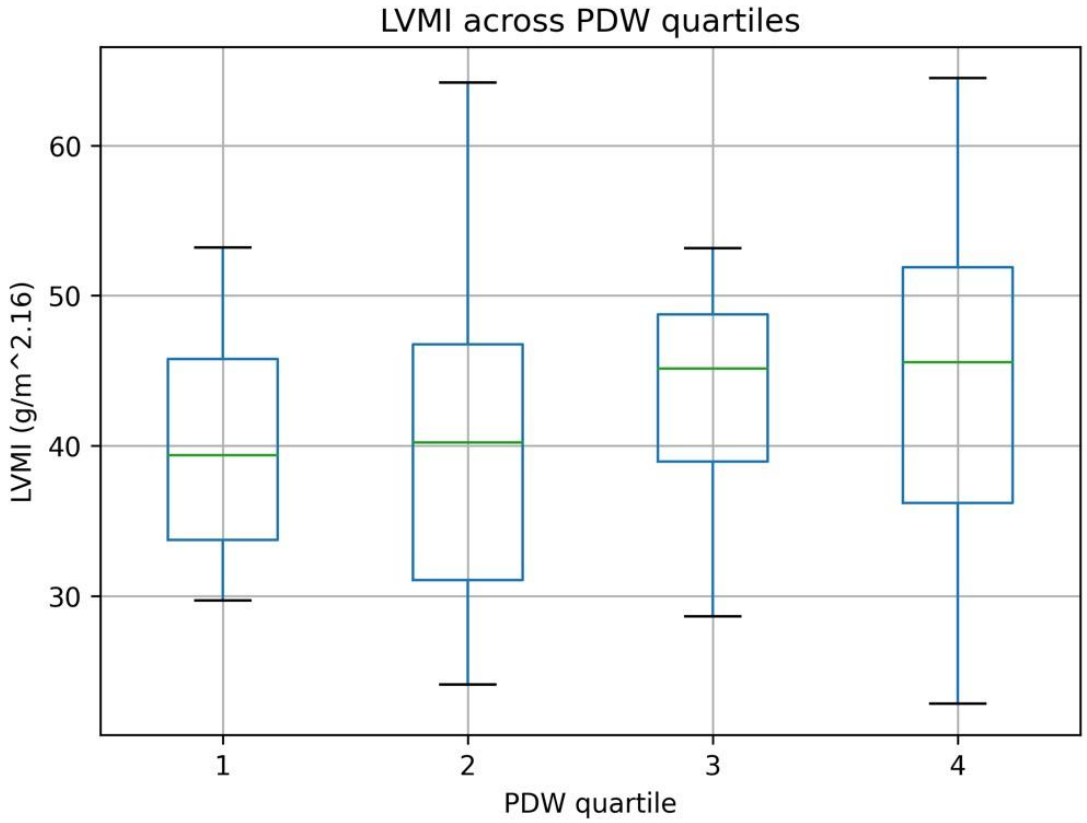
Footnote： AUC indicates area under the receiver operating characteristic curve. The optimal cutoff value was determined using the Youden index. The 95% CI for AUC was obtained by bootstrap resampling (1,000 iterations).

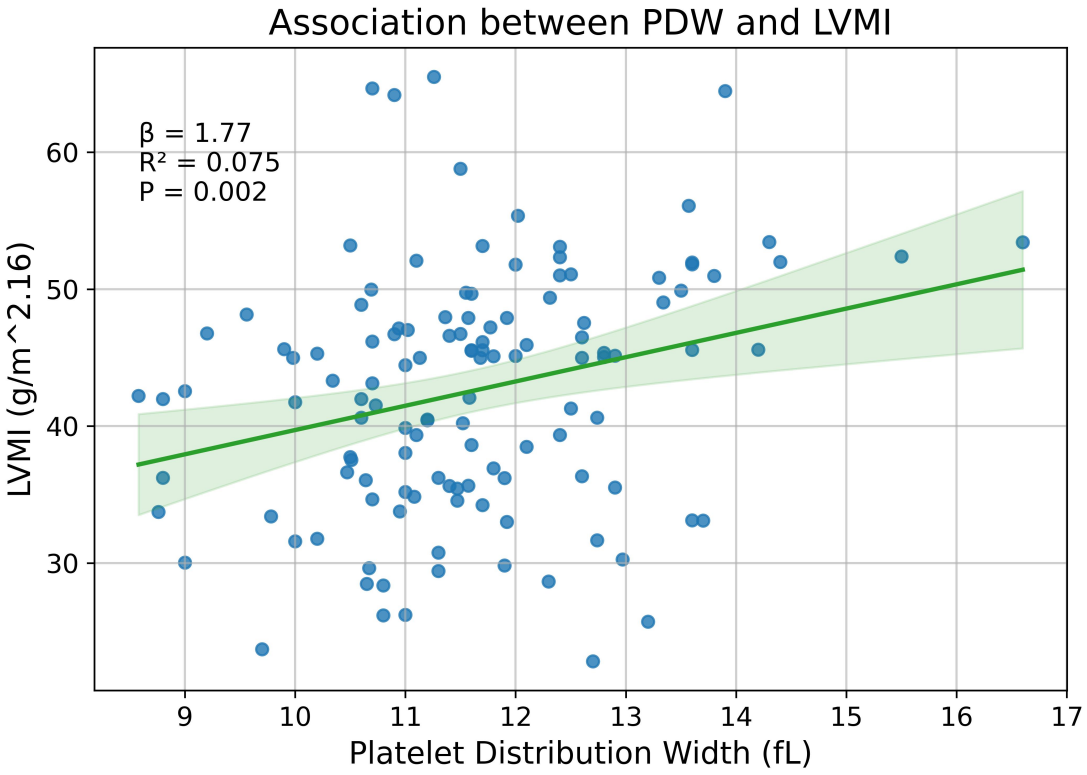
Supplementary Figure S1. Distribution of platelet distribution width (PDW) according to left ventricular hypertrophy (LVH) status.



Boxplots represent the median and interquartile range, with individual data points overlaid. Group comparisons were performed using the Mann – Whitney U test. PDW values were higher in children with LVH than in those without LVH.

Supplementary Figure S2. Association between platelet distribution width (PDW) and left ventricular mass index (LVMI).





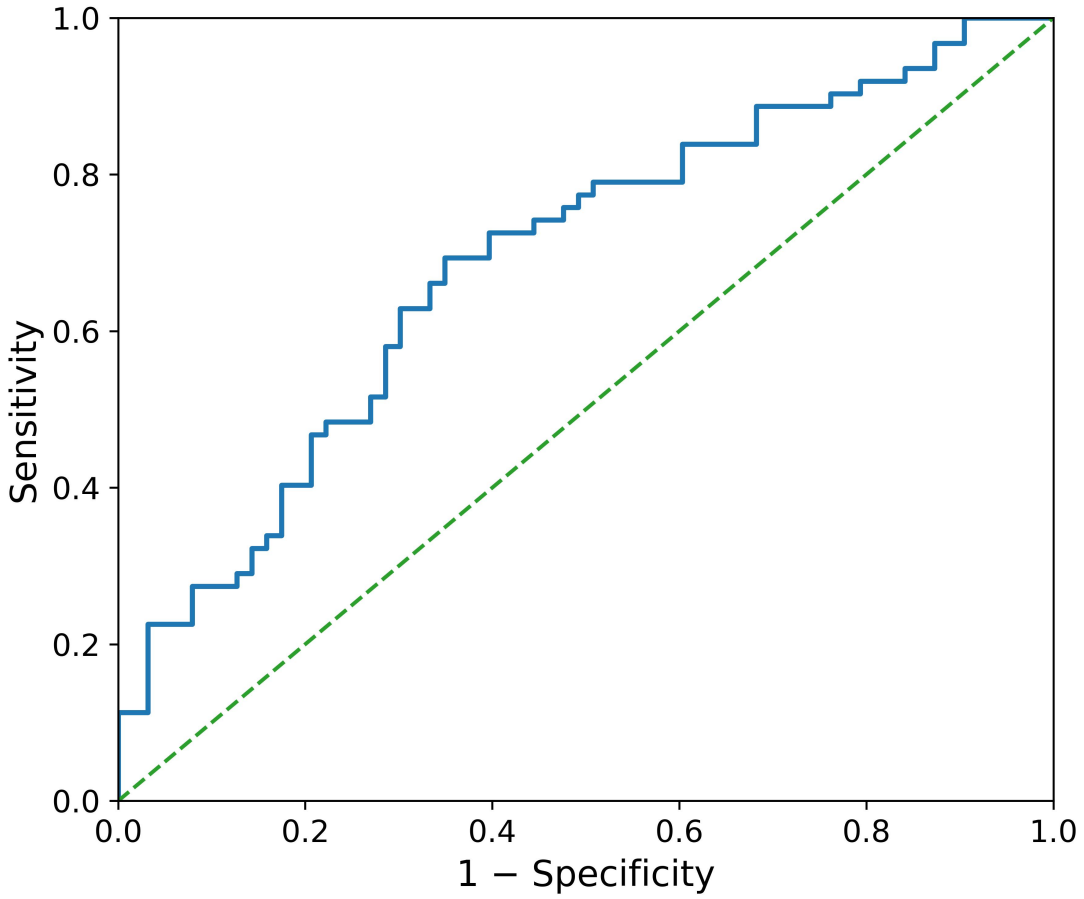
Supplementary Figure S2.

(A) Scatter plot showing the association between PDW and LVMI. The solid line represents the fitted linear regression line with 95% confidence interval.

(B) Distribution of LVMI across PDW quartiles (Q1 – Q4). P for trend was calculated using linear regression with quartiles entered as an ordinal variable.

In addition to the categorical analysis, PDW was positively associated with LVMI in linear regression analysis (β = 1.77, P = 0.002) (Supplementary Figure S1A). When categorized into quartiles, LVMI increased progressively across PDW groups (P for trend = 0.028) (Supplementary Figure S1B).

Supplementary Figure S3. Receiver operating characteristic (ROC) curve of PDW for predicting left ventricular hypertrophy.



Supplementary Figure S3. Receiver operating characteristic (ROC) curve demonstrating the discriminatory performance of platelet distribution width (PDW) for predicting left ventricular hypertrophy (LVH) in the matched sample. The area under the curve (AUC) was 0.696 (95% CI reported in Supplementary Table S3).