

ERRATUM

Erratum to: Prolonged thrombocytopenia after living donor liver transplantation is a strong prognostic predictor irrespective of history of splenectomy: the significance of ADAMTS13 and graft function

Yu Nobuoka¹ · Hideo Wada² · Shugo Mizuno¹ · Masashi Kishiwada¹ ·
Masanobu Usui¹ · Hiroyuki Sakurai¹ · Masami Tabata¹ · Toshihiko Kobayashi³ ·
Tsutomu Nobori² · Shinji Uemoto⁴ · Shuji Isaji¹

Published online: 21 April 2016
© The Japanese Society of Hematology 2016

Erratum to: Int J Hematol (2014) 99:418–428 DOI 10.1007/s12185-014-1543-9

The author would like to correct the errors in the publication of the original article. The corrected details are given below for your reading.

The original article was published with the incorrect title. The correct title should read: “Prolonged thrombocytopenia after living donor liver transplantation is a strong prognostic predictor irrespective of splenectomy: the significance of ADAMTS13 and graft function”.

Secondly, the last two sentences beneath the heading “Abstract” should read as “Irrespective of splenectomy, platelet counts and ADAMTS13 activity in the LP group remained low until POD28, while VWF/ADAMTS13 ratio significantly increased until POD28. These results suggest that prolonged thrombocytopenia after LDLT was associated with not only a decrease in ADAMTS13 due to sinusoidal endothelial cell injury, but also low TPO

The online version of the original article can be found under doi:[10.1007/s12185-014-1543-9](https://doi.org/10.1007/s12185-014-1543-9).

✉ Hideo Wada
wadahide@clin.medic.mie-u.ac.jp

¹ Department of Hepatobiliary-Pancreatic and Transplant Surgery, Mie University Graduate School of Medicine, Tsu, Mie, Japan

² Department of Molecular and Laboratory Medicine, Mie University Graduate School of Medicine, 2-174 Edobashi, Tsu, Mie 514-0001, Japan

³ Department of Hematology, Mie University Graduate School of Medicine, Tsu, Mie, Japan

⁴ Hepatobiliary Pancreatic and Transplantation Surgery, Kyoto University Graduate School, Kyoto, Japan

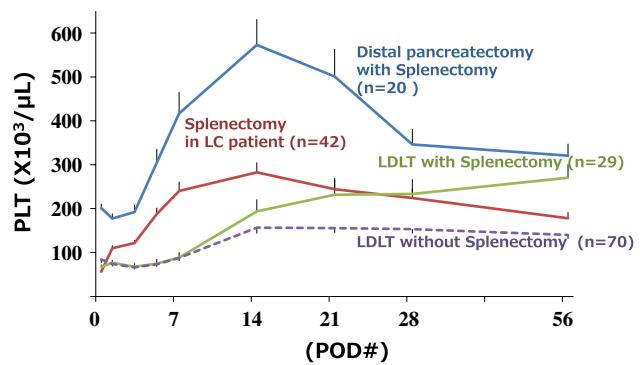


Fig. 1 Comparison of postoperative platelet counts between LDLT and other operative procedures with or without splenectomy (with standard error bars)

production due to hepatocyte dysfunction, irrespective of splenectomy.”

Errors have subsequently been identified in the original publication, and the following corrections should be noted:

1. The revised Figs. 1 and 5 and Tables 1, 2, 3 and 4 were replaced with this erratum.
2. References [18] and [27] should be replaced as below.

18. Takei Y, Marzi I, Gao WS, Gores GJ, Lemasters JJ, Thurman RG. Leukocyte adhesion and cell death following orthotopic liver transplantation in the rat. *Transplantation*. 1991;51(5):959–65.

27. Cywes R, Mullen JB, Stratis MA, Greig PD, Levy GA, Harvey PR, Strasberg SM. Prediction of the outcome of transplantation in man by platelet adherence in donor liver allografts. Evidence of the importance of prepreservation injury. *Transplantation*. 1993;56(2):316–23.

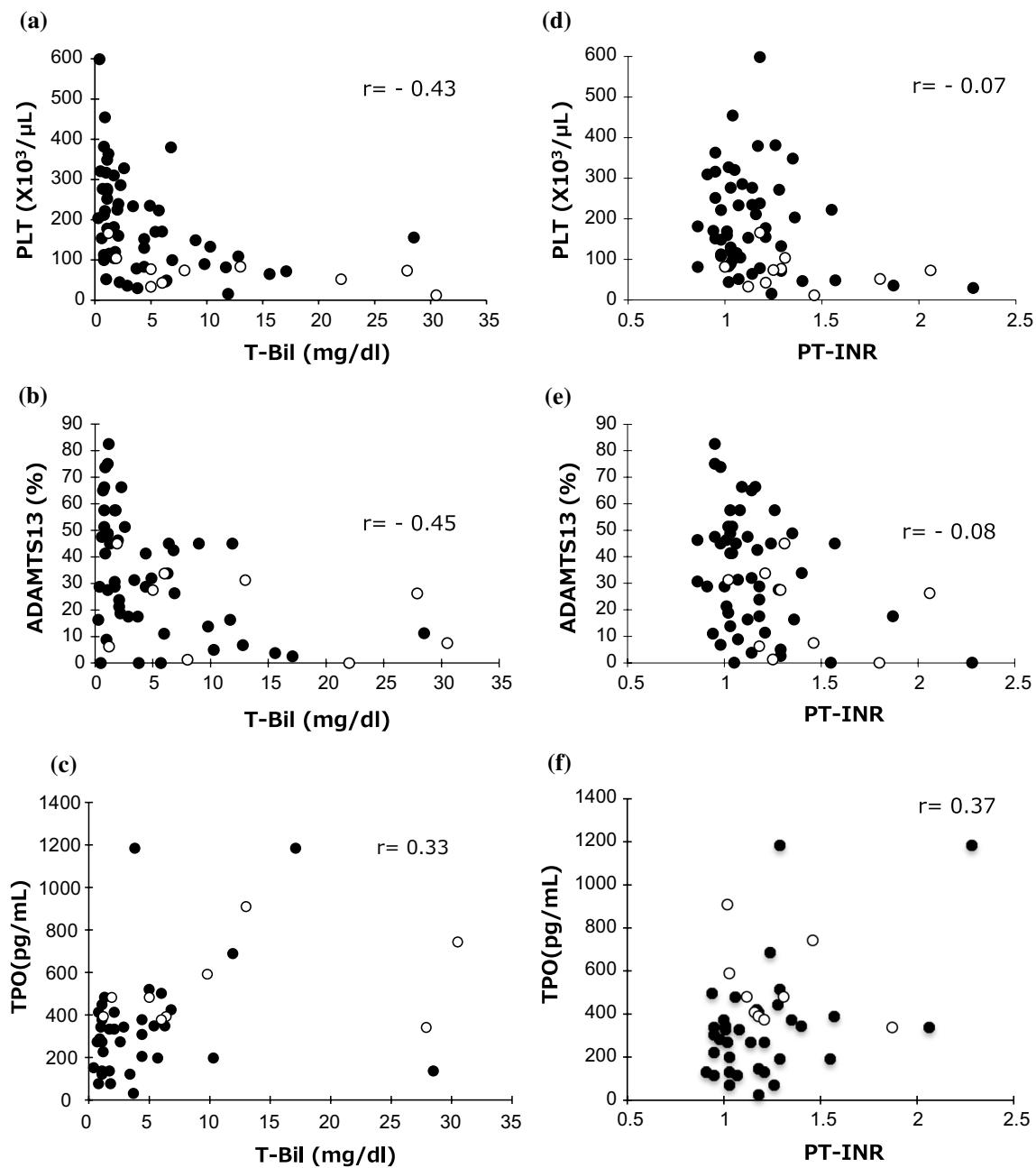


Fig. 5 Correlation between PLT and TB/PT-INR, ADAMTS13 and TB/PT-INR, and TPO levels and TB/PT-INR on POD14. The open circles designate patients who died within 6 months of LT

Table 1 Background of the 100 adult LDLT recipients ($n = 100$)

Age (year old)	53.7 (20–70)
Gender (male/female)	61/39
Etiology of liver disease	
Liver cirrhosis (HCC)	68 (39)
PBC	14
PSC	2
Fulminant hepatitis	11
Others	5
C-P score	9.6 (5–15)
MELD score	17.9 (6–45)
Donor age (year old)	38.0 (18–65)
Graft (right/left/post)	64/34/2
GRWR (%)	0.969 (0.441–1.571)
WIT (min)	48.7 (21–113)
CIT (min)	108.9 (10–424)
Splenectomy	29 (29 %)
Blood loss (ml)	11115 ^a (1426–74,480)
Transfusion	
RBC (unit)	41 ^a (4–213)
Platelet (unit)	40 ^a (0–120)
FFP (unit)	40 ^a (0–152)

HCC hepatocellular carcinoma, PBC primary biliary cirrhosis, PSC primary sclerosing cholangitis, C-P Child-Pugh, MELD modified end-stage liver disease, GRWR graft to recipient weight ratio, WIT warm ischemia time, CIT cold ischemia time, RBC red blood cells, FFP fresh frozen plasma

^a Median

Table 2 Postoperative complications in LP and HP groups

	LP group ($n = 36$)	HP group ($n = 62$)	P value
Complication	15 (41.7 %)	12 (19.4 %)	0.02
Pneumonia	5	3	0.12
Sepsis	4	5	0.33
Biliary leakage	0	5	0.10
ARF	7	2	0.01
HAT	4	2	0.13

Bold values indicate statistically significant differences

ARF acute renal failure (all recipients underwent renal replacement therapy), HAT hepatic artery thrombosis

Table 3 Patient characteristics (HP and LP group)

	All (n = 65)	HP group (n = 42)	LP group (n = 23)	P
Preoperative factor	Mean ± S.D.			
Age (years)	53.09 ± 10.44	52.36 ± 11.71	54.39 ± 7.98	0.461
Gender (male)	39 (60.0 %)	27 (64.3 %)	12 (52.2 %)	0.198
C-P score	9.65 ± 2.58	8.69 ± 2.32	11.17 ± 2.04	<0.001
MELD score	18.30 ± 9.57	15.60 ± 7.86	22.22 ± 10.00	0.009
GRWR (%)	1.02 ± 0.19	1.04 ± 0.19	0.97 ± 0.18	0.168
Platelet	75.47 ± 61.13	82.69 ± 58.84	64.17 ± 65.34	0.248
AT (%)	51.33 ± 25.19	58.17 ± 25.58	39.22 ± 20.41	0.003
ADAMTS13 (%)	69.09 ± 36.96	75.84 ± 37.47	59.24 ± 32.94	0.080
vWF (%)	285.35 ± 156.22	275.26 ± 150.77	309.30 ± 167.97	0.406
vWF/ADAMTS13	6.77 ± 8.57	5.56 ± 5.001	8.72 ± 12.73	0.158
Intraoperative factor				
Splenectomy	/ (21.4 %)	9/42 (21.4 %)	5/23 (21.7 %)	0.606
CIT (min)	110.34 ± 73.82	106.56 ± 54.88	120.17 ± 100.09	0.551
WIT (min)	46.78 ± 16.31	48.76 ± 18.09	43.13 ± 12.53	0.191
Blood loss (ml)	16370 ± 15363	17122 ± 17822	15379 ± 9987	0.615
Transfusion				
RBC (unit)	43.02 ± 40.44	43.26 ± 45.42	43.30 ± 31.20	0.997
FFP (unit)	37.33 ± 34.58	38.33 ± 36.94	36.26 ± 31.20	0.820
Platelet (unit)	33.56 ± 27.04	32.26 ± 29.64	34.78 ± 22.08	0.722
PVP (mmHg)	18.92 ± 5.05	18.62 ± 4.72	19.57 ± 5.70	0.481
Postoperative factor (POD14)				
TB (mg/dl)	5.63 ± 6.93	3.38 ± 4.92	9.65 ± 8.18	0.002
PT-INR	1.18 ± 0.27	1.09 ± 0.15	1.35 ± 0.36	0.003
CRP	4.40 ± 4.65	3.95 ± 4.38	5.61 ± 5.21	0.192
AT (%)	81.49 ± 22.11	89.54 ± 14.48	67.49 ± 26.13	0.001
ADAMTS13 (%)	33.34 ± 21.03	39.94 ± 21.22	21.73 ± 15.09	0.001
vWF (%)	285.35 ± 156.22	343.40 ± 100.96	336.03 ± 125.66	0.802
vWF/ADAMTS13	23.31 ± 38.47	15.99 ± 21.50	35.87 ± 55.44	0.129

Italic values indicate statistically significant differences

C-P Child-Pugh score, MELD modified end-stage liver disease, GRWR graft to recipient weight ratio, AT antithrombin, ADAMTS13 a disintegrin and metalloproteinase with a thrombospondin type 1 motifs 13, vWF von Willebrand Factor, CIT cold ischemia time, WIT warm ischemia time, RBC red blood cell, FFP fresh-frozen plasma, PVP portal venous pressure, TB total bilirubin, PT-INR prothrombin time international normalized ratio, CRP C-reactive protein

Table 4 Risk factors for postoperative thrombocytopenia on POD14

	Univariate analysis (<i>n</i> = 65)		Multivariate analysis	
	Correlation coefficients	<i>P</i>	Regression coefficient	<i>P</i>
Preoperative factor				
C-P score	<i>-0.445</i>	<i><0.001</i>	-0.088	0.632
MELD score	<i>-0.309</i>	<i>0.012</i>	0.053	0.296
Platelet	0.362	<i>0.003</i>	0.032	0.829
AT (%)	<i>0.379</i>	<i>0.003</i>	<i>0.417</i>	<i>0.002</i>
Postoperative factor (POD14)				
TB (mg/dl)	<i>-0.430</i>	<i><0.001</i>	-0.171	0.244
PT-INR	<i>-0.324</i>	<i>0.010</i>	-0.122	0.352
AT (%)	<i>0.431</i>	<i><0.001</i>	0.212	0.137
ADAMTS13 (%)	<i>0.416</i>	<i>0.001</i>	<i>0.331</i>	<i>0.011</i>

Italic values indicate statistically significant differences

C-P Child-Pugh score, *MELD* modified end-stage liver disease, *AT* antithrombin, *TB* total bilirubin, *PT-INR* prothrombin time international normalized ratio, *ADAMTS13* a disintegrin and metalloproteinase with a thrombospondin type 1 motifs 13