CORRECTION

Open Access

Correction to: SGLT2 inhibitors and lower limb complications: an updated meta-analysis



Chu Lin^{1†}, Xingyun Zhu^{1†}, Xiaoling Cai^{1*}, Wenjia Yang¹, Fang Lv¹, Lin Nie² and Linong Ji^{1*}

Correction to: Cardiovasc Diabetol (2021) 20:91 https://doi.org/10.1186/s12933-021-01276-9

Following publication of the original article [1], the authors regret the errors of the original data display in the forest plots, which has been corrected with this erratum.

For the analysis of amputation, in DAPA-CKD study, there should be 35 amputation events out of 2149 total events in SGLT2i treatment arm, and 39 amputation events out of 2149 total events in control treatment arm. And in DELIGHT study, there should be 1 amputation event out of 145 total events in SGLT2i treatment arm.

For the analysis of PAD and DF, there should be 573 total events in SGLT2i treatment arm in DEPICT-1 study, and there should be 419 total events in SGLT2i treatment arm in EMPA Barnett 2014, according to the data from *Clinicaltrial.gov*.

The data has been updated with in the new Fig. 1a and Fig. 1b. Some results from the sensitivity analyses were slightly changed and have been also updated in the new Table 1. The results of meta-regression remained unchanged in current reserved decimal digits. Such mild changes did not cause any substantial influence to the conclusion and clinical significance of our study. The contents in the abstract and main text have also been updated. All revisions are highlighted in bold fonts as follows.

In the result section of the abstract, the revision is shown as "The numbers of SGLT2i users versus non-SGLT2i users in the analyses of amputation, PAD and DF were **40,765/33,406**, **36,701/28,676** and **32,043/25,558** respectively".

In the *Included studies* section of the main text, the revision is shown as "The numbers of SGLT2i users versus non-SGLT2i users in the analyses of amputation, PAD and DF were **40,765/33,406**, **36,701/28,676** and **32,043/25,558** respectively".

In the Risk of amputation, PAD and DF in patients with SGLT2i treatment section of the main text, the revisions are shown as: (1) "Compared with non-SGLT2i users, the risk of amputation (OR = 1.21, 95% CI 1.06 to 1.37, P = 0.004) (Fig. 1a)"; (2) "As for study population, the incidence of amputation (OR = 1.24, 95% CI 1.08 to 1.42, P = 0.002) and PAD (OR = 1.22, 95% CI 1.03 to 1.45, P = 0.02) were significantly increased in SGLT2i users versus non-SGLT2i users....."; (3) "Moreover, the risk of amputation (OR = 1.22, 95% CI 1.03 to 1.44, P = 0.02) were significantly higher in RCTs with study duration longer than 52 weeks....."

The original article can be found online at https://doi.org/10.1186/s12933-021-01276-9.

*Correspondence: dr_junel@sina.com; prof_jilinong@aliyun.com [†]Chu Lin and Xingyun Zhu contributed equally to this manuscript ¹ Department of Endocrinology and Metabolism, Peking University

People's Hospital, No.11 Xizhimen South Street, Xicheng District, Beijing 100044, China

Full list of author information is available at the end of the article



© The Author(s) 2021. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativeco mmons.org/licenses/by/4.0/. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/ zero/1.0/ apolies to the data made available in this article, unless otherwise stated in a credit line to the data.

EMPA Hadjadj 2016

EMPA Haring 2013

EMPA Haring 2014

EMPA Kovas 2014

EMPA Ridderstråle 2014

EMPA Rosenstock 2014

EMPA Rosenstock 2015

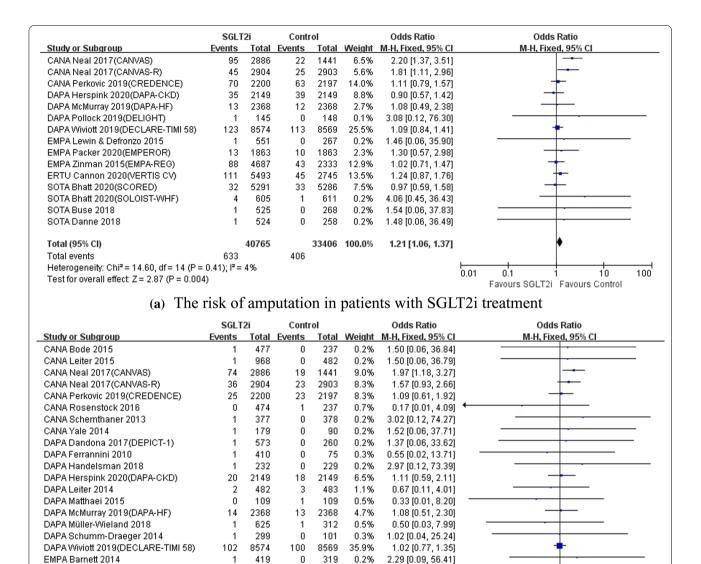
ERTU Grunberger 2017

ERTU Rosenstock 2018

ERTU Hollander 2019

SOTA Grag 2017

EMPA Zinman 2015(EMPA-REG)



Total (95% CI)	36701		28676	100.0%	1.21 [1.03, 1.42]
Total events	393	245			
Heterogeneity: Chi ² = 14.34, df = 30 (P = 0.99); l ² = 0%					
Test for overall effect: Z = 2.31 (P = 0.02)					

339

441

431

330

765

375

324

313

880

412

699

4687

1

1

1

0

Ω

2

1

99

2

1

2

0

0

0

0

1

2

0

0

38

1

Ω

0

1

171

225

206

168

780

188

170

2333

154

430

209

703

0.2%

0.2%

0.2%

0.7%

0.9%

0.2%

0.2%

18.1%

0.5%

0.2%

0.2%

0.5%

1.52 [0.06, 37.51]

1.54 [0.06, 37.85]

1.44 [0.06, 35.48]

0.17 [0.01, 4.17]

0.20 [0.01, 4.24]

2.52 [0.12, 52.83]

1.58 [0.06, 39.02]

0.98 [0.09, 10.94]

1.47 [0.06, 36.12]

2.55 [0.12, 53.39]

0.33 [0.01, 8.23]

0.01

0.1

Favours SGLT2i Favours Control

10

100

1.30 [0.89, 1.90]

(b) The risk of PAD in patients with SGLT2i treatment

Fig. 1 The risk of amputation and PAD in patients with SGLT2i treatment. a The risk of amputation in patients with SGLT2i treatment. b The risk of PAD in patients with SGLT2i treatment. PAD peripheral arterial disease, SGLT2i sodium glucose co-transporter 2 inhibitor

Subgroup	No. of participants (SGLT2i/ control)	OR	95% CI	P value	l ² (%)
Risk of amputation by SGLT2i subtypes					
In total*	40,765/33,406	1.21	1.06, 1.37	0.004	4
Canagliflozin*	7990/6541	1.60	1.04, 2.46	0.03	67
Dapagliflozin	13,236/13,234	1.05	0.85, 1.30	0.66	0
Empagliflozin	7101/4463	1.07	0.76, 1.49	0.71	0
Ertugliflozin	5493/2745	1.24	0.87, 1.76	0.23	NA
Sotagliflozin	6945/6423	1.08	0.68, 1.70	0.75	0
Risk of amputation by study types					
CVOT and ROT*	39,020/32,465	1.20	1.06, 1.37	0.005	30
Efficacy and safety evaluation	1745/941	1.80	0.36, 8.95	0.47	0
Risk of amputation by population					
DM only*	34,715/27,194	1.24	1.08, 1.42	0.002	15
Including patients without DM	6380/6380	1.00	0.70, 1.43	1.00	0
Risk of amputation by control types	0300/0300	1.00	0.70, 1.43	1.00	0
Active agent	551/267	1.46	0.06, 35.90	0.82	NA
Placebo*		1.40	1.06, 1.37	0.004	NA 11
	40,214/33,139	1.21	1.00, 1.57	0.004	11
Risk of amputation by study duration (we		2.00	012 76 20	0.40	
< 26	145/148	3.08	0.12, 76.30	0.49	NA
26–52	2205/1404	2.34	0.58, 9.52	0.23	0
>52*	38,415/31,854	1.20	1.05, 1.36	0.006	31
Risk of PAD by SGLT2i subtypes			4 99 4 49		
In total*	36,701/28,676	1.21	1.03, 1.42	0.02	0
Canagliflozin*	10,465/7965	1.53	1.14, 2.05	0.005	0
Dapagliflozin	15,821/14,655	1.02	0.81, 1.29	0.85	0
Empagliflozin	8111/4560	1.25	0.88, 1.78	0.21	0
Ertugliflozin	1605/793	1.49	0.30, 7.42	0.62	0
Sotagliflozin	699/703	0.33	0.01, 8.23	0.50	NA
Risk of PAD by study types					
CVOT and ROT*	25,768/21,960	1.24	1.05, 1.46	0.01	6
Efficacy and safety evaluation	10,933/6716	0.94	0.54, 1.63	0.82	0
Risk of PAD by population					
DM only*	32,184/24,159	1.22	1.03, 1.45	0.02	0
Including patients without DM	4517/4517	1.10	0.67, 1.79	0.71	0
Risk of PAD by control types					
Active agent	3847/2611	1.00	0.33, 3.06	1.00	0
Placebo*	32,854/26065	1.21	1.03, 1.43	0.02	0
Risk of PAD by study duration (weeks)					
< 26	5114/3162	0.90	0.43, 1.89	0.78	0
26–52	2855/1717	1.62	0.48, 5.52	0.44	0
> 52*	28,632/23,797	1.22	1.03, 1.44	0.02	0
Risk of DF by SGLT2i subtypes					
In total	32,043/25558	1.23	0.93, 1.63	0.15	0
Canagliflozin	9137/7113	1.55	0.94, 2.54	0.09	0
Dapagliflozin	14,586/13,806	1.20	0.79, 1.82	0.40	0
Empagliflozin	7127/4055	0.89	0.48, 1.65	0.71	0
Ertugliflozin	1193/584	1.48	0.15, 14.23	0.74	0
Risk of DF by study types		=		'	ő
CVOT and ROT	25,768/21,960	1.23	0.91, 1.66	0.17	0
Efficacy and safety evaluation	6275/3598	1.23	0.53, 2.84	0.63	0

Table 1 Risk of amputation, PAD and DF events in patients with SGLT2i treatment

Table 1 (continued)

Subgroup	No. of participants (SGLT2i/ control)	OR	95% CI	P value	l ² (%)
Risk of DF by population					
DM only	27,526/21,041	1.27	0.95, 1.71	0.11	0
Including patients without DM	4517/4517	0.89	0.34, 2.31	0.81	0
Risk of DF by control types					
Active agent	4164/2459	1.53	0.44, 5.33	0.50	0
Placebo	27,879/23,099	1.22	0.91, 1.63	0.18	0
Risk of DF by study duration (weeks)					
< 26	1183/562	1.45	0.23, 9.22	0.69	0
26–52	3029/1606	1.45	0.42, 4.93	0.56	0
> 52	27,831/23,390	1.22	0.91, 1.63	0.19	0

PAD peripheral arterial disease, SGLT2i sodium glucose co-transporter 2 inhibitor, DF diabetic foot, DM diabetes mellitus, CVOT cardiovascular outcome trial, ROT renal outcome trial, OR odd ratio, CI confidence interval, NA not applicable

*P<0.05

Author details

¹Department of Endocrinology and Metabolism, Peking University People's Hospital, No.11 Xizhimen South Street, Xicheng District, Beijing 100044, China. ²Department of Endocrinology and Metabolism, Beijing Airport Hospital, Beijing, China.

Published online: 09 June 2021

Reference

 Lin C, Zhu X, Cai X, Yang W, Lv F, Nie L, Ji L. SGLT2 inhibitors and lower limb complications: an updated meta-analysis. Cardiovasc Diabetol. 2021;20(1):91. https://doi.org/10.1186/s12933-021-01276-9.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ready to submit your research? Choose BMC and benefit from:

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

At BMC, research is always in progress.

Learn more biomedcentral.com/submissions

