

A

		Risk of bias domains					
		D1	D2	D3	D4	D5	Overall
Study	LIRA-Ramadan	+	+	+	+	+	+
	LixiRam	+	+	+	+	+	+
	Treat 4 Ramadan	+	+	+	+	+	+

Domains:
D1: Bias arising from the randomization process.
D2: Bias due to deviations from intended intervention.
D3: Bias due to missing outcome data.
D4: Bias in measurement of the outcome.
D5: Bias in selection of the reported result.

Judgement
+ Low

B

		Risk of bias domains							
		D1	D2	D3	D4	D5	D6	D7	Overall
Study	Pathan 2024	X	+	+	+	-	+	+	X

Domains:
D1: Bias due to confounding.
D2: Bias due to selection of participants.
D3: Bias in classification of interventions.
D4: Bias due to deviations from intended interventions.
D5: Bias due to missing data.
D6: Bias in measurement of outcomes.
D7: Bias in selection of the reported result.

Judgement
X Serious
- Moderate
+ Low

Supplementary Figure 1 Risk of bias summary. A: Review authors' judgments about each risk of bias item for each included randomized controlled trial using risk of bias 2; B: Review authors' judgments about each risk of bias item for each included non-randomized trial using ROBINS-I.

Supplementary Table 1 Characteristics of the excluded studies and study participants

Ref.	Type of study	Reason of exclusion	Study subjects	<i>n</i>	Study findings
Hassanein <i>et al</i> [21], 2024, Multicenter across nine countries	Prospective, real-world, observational study	No non-glucagon-like peptide-1 receptor agonist control group	Adults (≥ 18 years of age) with T2DM treated with iGlarLixi for ≥ 3 months at study entry	420	Concomitant iGlarLixi and sodium-glucose cotransporter-2 inhibitors therapy with or without other OADs was demonstrated to be safe in adults with T2DM during Ramadan fast, with a low risk of hypoglycemia and improvements in glycemic outcomes
Sahay <i>et al</i> [22], 2020, Multicenter across five countries	Phase IV, randomized, multicenter, open-label, two-arm parallel-group clinical trial	A post hoc analysis of the LixiRam trial	Uncontrolled T2DM on SU + basal insulin ± one OAD	150	The risk of any hypoglycemia was lower with lixisenatide + basal insulin <i>vs</i> SU + basal insulin (OR = 0.09; 95%CI: 0.01–0.69). The 1.3% participant with lixisenatide + basal insulin <i>vs</i> 6.8% participants with SU + basal insulin experienced ≥ 1 documented symptomatic hypoglycemic event (OR = 0.22; 95%CI: 0.02–1.93)

OAD: Oral antidiabetic drugs; OR: Odds ratio; SGLT2i; T2DM: Type 2 diabetes mellitus; SU: Sulfonylurea.