The Cost-Effectiveness Analysis of Anaprazole Versus Ilaprazole for Treating Duodenal Ulcers in China

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Background

- **Anaprazole** is a **innovative drug** developed in China for the treatment of **peptic ulcer disease**, which has shown promising results in initial clinical trials.
- It has the potential to become a new treatment option and may reduce the financial burden on patients compared to imported proton pump inhibitors.

Objectives

- To evaluate the economic efficacy of **Anaprazole** compared to **Ilaprazole enteric coated tablets** (**Ilaprazole**) in the treatment of **duodenal ulcers** (**DU**).

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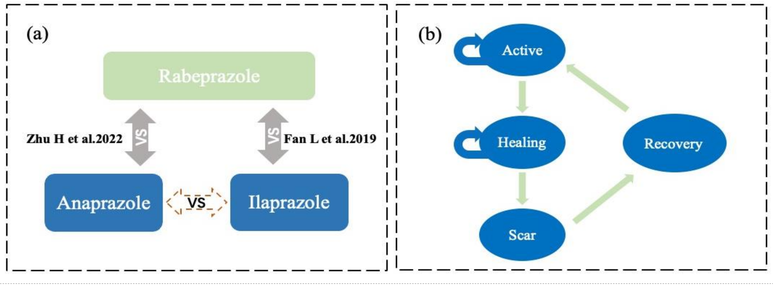
Methods

- From the perspective of the **health system**, this study utilized **two multicenter randomized controlled trial** (**RCT**) as data sources.
- We will compare the **efficacy** and **safety** of **Anaprazole** and **Ilaprazole** using **anchored indirect matching-adjusted comparison** (**MAIC**).
- **Cost-utility analysis** (**CUA**) was conducted to assess the **economic value** of the two drugs based on a **Markov model**.
- To test the **uncertainty** in the model, **deterministic sensitivity analysis** (**DSA**) and **probability sensitivity analysis** (**PSA**) were performed.

flow graph

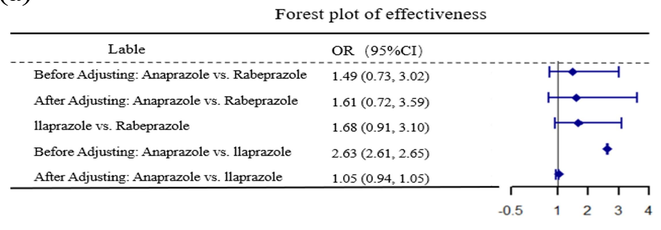


Results

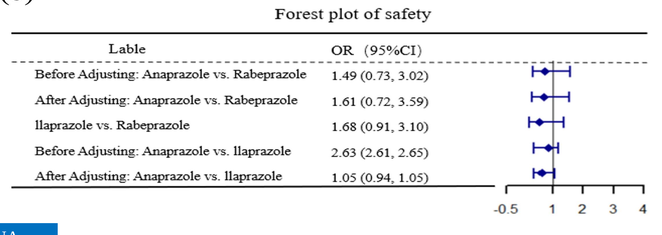
- **Anaprazole** and **Ilaprazole** are equally **effective** in treating DU (**OR = 1.05; 95% CI, 0.94-1.01; P=0.35**).
- There was no significant difference in the incidence of **adverse drug reactions (ADRs)** between **Ilaprazole** and **Anaprazole** (**OR = 0.63; 95% CI, 0.39-1.08; P=0.12**).
- The **CUA** results show that the **ICUR** value is **2995.41 ￥/QALY**, which is lower than **willingness to pay** (**WTP**).
- **DSA** showed that the two most sensitive factors to the model were the drug cost of A**naprazole** and **Ilaprazole**, respectively; **PSA** shows that when the **WTP** value is **85698.00 ￥**， the probability of **Anaprazole** being more cost effective than **Ilaprazole** is **85%**.

MAIC

(a)



(b)

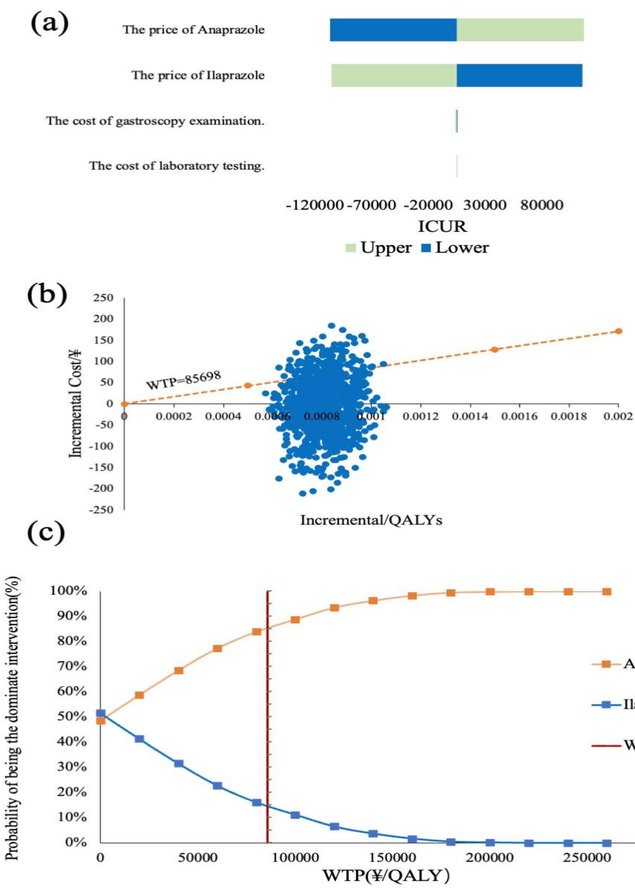


CUA

Cost-utility analysis result

Group	Cases	cost (C, ￥)	Utility (U, QALY)	C/U (￥/QALY)	ICUR (￥/QALY)
Anaprazole	179	5423.6137	0.9803	5532.8304	2995.4090
Ilaprazole	129	5421.1818	0.9794	5534.9337	

Sensitivity analysis



Conclusion

- Compared with **Ilaprazo**le, **Anaprazole** have similar efficacy and safety when used for the treatment of **DU**, The **ICUR** value is lower than **WTP**, indicating good economic benefits and robust sensitivity analysis results.

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