RESULT
The results showed that citral markedly attenuated IL-1β, IL-6, and TNF-α levels. Meanwhile, treatment with citral retained serum GSH levels, led to a lower MDA level and also ameliorated neurologic outcome in rats. Citral treatment significantly decreased serum glucose level, serum TG, TC and LDL. Citral administration dramatically upregulated the expression of p62, and downregulated the level of LC3, beclin-1.

CONCLUSION
All data reveal that citral could effectively ameliorate cerebral ischemia/reperfusion injury via ameliorating inflammatory response, oxidative stress, and improving autophagy through PI3K/Akt/mTOR signaling pathway in diabetic rats.

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PREVALENCE, CLINICAL PRESENTATION AND TREATMENT OUTCOMES OF ACROMEGALY: A DESCRIPTIVE STUDY FROM THE MALAYSIAN ACROMEGALY REGISTRY

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OBJECTIVES
The Malaysian Acromegaly Registry aimed to improve utilization of health care resource of this rare disease. Prior analyses were performed between 2013 - 2016, which reported 140 patients from 12 hospitals.

METHODOLOGY
Demographic, clinical and imaging data of all adult acromegaly patients from 23 public and university hospitals were collected and entered into an online database from September 2020 - April 2021. Disease control was defined by normal age- and gender-specific IGF-1.

RESULTS
We analysed 247 patients [median age 56 years (44.0-65.5), 50.6% male, 42% Malays, disease duration 7 years(3.8 – 14.0)]. An estimated acromegaly prevalence of 7.6 per million Malaysian population was derived. The more common presentations were acral enlargement (84.6%), prognathism (79.8%) and headache (44.5%). Hypertension (57.5%), diabetes (46.6%) and sleep apnoea (18.2%) were the most frequent co-morbidities. The mean IGF-1 at diagnosis was 711.1 ± 293 ng/ml. Majority had macroadenoma (70.4%) with up to 22.7% having optic chiasm impingement. Out of 195 patients who underwent primary surgery, only 22.1% achieved disease control. A second surgery failed to achieve control in 75%. Two-thirds (65.8%) of the 117 patients who failed the first surgery received somatostatin receptor analogue (SSA) and/or dopamine agonist. Although 43.7% experienced uncontrolled disease after medical therapy, less than one-fifth underwent radiotherapy or radiosurgery during their course of illnesses. Pituitary hormone deficiency occurred in up to 15.4%, with hypocortisolism being most frequent.

CONCLUSIONS
The low prevalence compared to global figures reflect under-recognition of acromegaly in Malaysia. The high rate of disease persistence after surgery has made SSA second line therapy of choice. The use of radiotherapy in acromegaly was low.