INTRODUCTION

1) Background of study:

- *in-vitro* antiurolithic effect (proven)\(^1\)
- Toxicity of henna (present study)
- *in-vivo* antiurolithic effect (future)

- only scant toxicity studies about Malaysia henna
- hardly any study on histopathological changes of liver and kidneys of mice due to henna leaves extracts administration.

2) Objective:

To compare the histopathological changes of liver and kidneys between control and treatment groups of the mice due to the administration of hydroethanolic extract of henna leaves.

RESULTS AND DISCUSSION

1) Liver

- Presence of pyknotic nuclei indicated occurrence of apoptosis.
- Could be triggered by quercetin or naringenin that present in Malaysian henna extracts.\(^2\)
- Quercetin was established as a pro-apoptotic agent.\(^3\)
- Naringenin could elicit cytotoxic effect and deter the metabolism of toxic compound by inhibiting cytochrome P450 enzymes\(^4\) present in liver and kidneys.

METHODOLOGY

Leaves extraction using soxhlet → Single dose of 2000 mg/kg extracts → 14 days observation period → Histopathological assessments (liver and kidneys) → Sacrifice and dissection.

RESULTS AND DISCUSSION

2) KIDNEYS

- Degeneration of connective tissues between the tubules possibly occur due to flavone apigenins that present in Malaysian henna extracts.\(^2\)
- Gradolatto et al. (2005) detected 1.18% and 0.32% apigenins in livers and kidneys on the 10\(^{th}\) day following oral administration.\(^6\)

- The mean weight of spleen between the control and treatment groups are considered statistically significant (p-value <0.05).
- There might be immune reactions happened in spleen due to the administration of henna extracts\(^6\)
- May be justified as the effect of phytochemical saponins.\(^7\)

CONCLUSION

It is scientifically proven that single dose of ethanolic extract of *Lawsonia inermis* (henna) leaves can cause toxicity towards liver and kidneys of the mice.

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REFERENCES