Ethical issues related to animal use in biomedical research

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BACKGROUND
ETHICAL ISSUES

- LIMITED FREEDOM
- CANNOT CONSENT
- DISTRESS & PAINFUL INTERVENTION
- KILLED
- NO BENEFIT FROM PARTICIPATION

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Festing & Wilkinson, 2007
- Animal welfare is very important
- Resource-limited setting:
  - A long-term goal: complete replacement of using animals
  - Mandatory goal: reduce the number of animals used and advancing refinement.

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Refinement

- to alleviate or minimize the pain, distress and other adverse effects suffered by the animals involved or enhance animal well-being.
OBJECTIVE
As of January 2013, Hang Tuah University has required its students to apply the research ethics.

The objectives of this study:
- to evaluate issues related to the use of animals in the undergraduates’ biomedical research proposals
- how the Research Ethics Committee advances the refinement of animal use in their researches.
METHODS
All undergraduate biomedical research proposals involving experimental animals in the period of January to June 2013 (32 proposals) were evaluated descriptively.
Ethical review

- Contribution to knowledge
- Objectives: realistic, original, timely?
- Design:
  - Choice & number of animals used
  - Experimental design → refinement
  - Competence of staff
  - Appropriate facilities
  - Communication of results

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Results
Experimental animal used in all 32 proposals: *Rattus norvegicus* Wistar strain.

10 proposals (31.3%): calculation of sample size has been corrected to conform with the reduce principle.
30 proposals (93.8%) were:

- derived from 14 herbal medicine & marine product researches: S. polycysticum, M. charantia, M. oleifera, red yeast rice, A. antiquata shell powder.

- used to treat chronic degenerative diseases (dyslipidemia), increase antioxidant and wound healing.

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2 proposals (6.2%) were:
- derived from one hyperbaric research.
19 proposals (59.4%): needed a change of
- experimental design (pretest posttest to posttest only control group design)
- better care of the animals
- appropriate pain management
- better euthanasia procedure.

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CONCLUSION
Consideration of practical and ethical aspects of laboratory animal use should be included in undergraduate biomedical courses.

A need to improve appreciation and commitment to advancement of refinement principle.

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REFERENCES

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THANK YOU