



A note on animal medicine and testing

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BACKGROUND

Animals are used repeatedly throughout the history of biomedical research. Ibn Zuhr (Avenzoar), an Arab physician in twelfth century Moorish Spain, introduced animal testing as a scientific method for testing surgical procedures before applying them to human patients.

In recent years, the practice of using animals for biomedical research has come under severe criticism by animal protection and animal rights groups. Laws are passed in several countries to form the practice more 'humane'. Debates on the ethics of animal testing have raged since the seventeenth century. Roosevelt within the nineteenth century stated, "Common sense without conscience may cause crime, but conscience without sense may cause folly, which is that the handmaiden of crime."

Those against, contend that the benefit to humans doesn't justify the harm to animals. Many of us also believe that animals are inferior to humans and really different from them, hence results from animals can't be applied to humans. Those in favor of animal testing argue that experiments on animals are necessary to advance medical and biological knowledge.

Bernard, referred to as the daddy of physiology, stated that "experiments on animals are entirely conclusive for the toxicology and hygiene of man. The consequences of those substances are an equivalent on man as on animals, but differences in degree". Bernard established animal experimentation as a part of the quality methodology.

Drug testing using animals became important within the twentieth century. In 1937, a drug company within the USA created a preparation of sulfanilamide, using diethylene glycol (DEG) as a solvent, and called the preparation 'Elixir Sulfanilamide'. DEG was poisonous to humans, but the company's chief pharmacist and chemist wasn't conscious of this. He simply added raspberry flavoring to the sulfa, which he had dissolved in DEG, and therefore the company marketed the merchandise. The preparation led to mass poisoning causing the deaths of quite 100 people. No animal testing was done. the general public outcry caused by this incident and other similar disasters led to the passing of the 1938 Federal Food, Drug, and Cosmetic Act requiring safety testing of medicine on animals before they might be marketed.

Another tragic drug fiasco occurred within the late 1950s and early 1960s with thalidomide. It had been found to act as an efficient tranquilizer and painkiller and was proclaimed a 'wonder drug' for insomnia, coughs, colds, and headaches. it had been found to possess an inhibitory effect on nausea, and hence, thousands of pregnant women took the drug to alleviate their symptoms. Consequently, quite 10,000 children in 46 countries were born with malformations or missing limbs (phocomelia, from the Greek meaning 'limb'). The drug was withdrawn in 1961 and 1968 after an extended campaign.

The above-mentioned incidents et al. illustrate the harm to humans from the utilization of drugs that haven't been first tested on animals and underline the importance of animal experimentation to avert or prevent human tragedy.

The practice of using animals in biomedical research has led to significant advances within the treatment of varied diseases.

Issues like 'cruelty' to animals and therefore the humane treatment of animals are valid concerns, and hence, the utilization of animals in experimentation is greatly regulated. This has led to the 3Rs campaign, which advocates the search for the replacement of animals with non-living

models; reduction within the use of animals; and refinement of animal use practices. However, total elimination of animal testing will significantly set back the event of essential medical devices, medicines, and treatment. By employing the 3Rs when continuing to use animals for research project, the scientific community can affirm its moral conscience also as uphold its obligation to humanity to further the advancement of science for civilization and humanity.