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**Original article:**

**Skeletal muscle relaxant property of diazepam by using rotarod on albino mice**

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**Abstract:**

The comparison of skeletal muscle relaxant property of Diazepam, in experimental animal models. To evaluate skeletal muscle relaxant effect of Diazepam to evaluate the agents having good skeletal muscle relaxant properties. The earliest known use of muscle relaxant drugs dates back to the 16th Centuary. When European explores encountered natives of the Amazon Basin in South America using poison-tipped arrows that produced death by skeletal muscle paralysis. This poison known today as curare, led to some of the earliest scientific studies in pharmacology. Its active ingredient, tubocurarine, an alkaloid as well as many synthetic derivatives, played a significant role in scientific experiments to determine the function of Acetylcholine in neuromuscular transmission. By 1943 neuromuscular blocking drugs became established as muscle relaxants in the practice of anesthesia and surgery.

A muscle relaxant is a drug which effects skeletal muscle function and decreases the muscle tone. It may be used to alleviate symptons such as muscle spasms, pain and hyperreflexia. The turn “Muscle relaxant” is used to refer to two major therapeutic groups: neuromuscular blockers & spasmolytics. This study was designed to evaluate the skeletal muscle relaxant properties of diazepam, It is found that diazepam appeared to be more effective and safe Previous studies suggested that the CNS depression and the non specific muscle relaxation effect can reduce the response of the motor coordination.

Skeletal muscle relaxants are used to treat two different types of conditions.

 1. Spasticity from upper motor neuron syndromes

 2. Muscular pains or spasms from peripheral musculoskeletal conditions.

In this study centrally acting skeletal muscle relaxants Diazepam and used and muscle relaxants activity The study was carried out in albino mice weighing 40gms.

Thus it was found that Diazepam Demonstrated muscle relaxant property but produced less muscle relaxant property as compared to Diazepam. Hence diazepam is considered to have maximum muscle relaxant property. This may due to its high lipid solubility.

**Keywords**: Muscle relaxant, daizepam, rotarod, albunomice