ANTISPERMATOGENIC ACTIVITY OF THE ORGANOTIN (II) COMPLEXE OF SCHIFF BASE LIGANDS DERIVATIVE IN MALE ALBINO RAT

Kavita Yadav[1], Hariom Nagar[1], Mudit Gupta[1]

**[1]Suresh GyanVihar University, Mahal Rooad, Jagatpura Jaipur (Raj.) India
LBS College, Jaipur (Raj.) India.**

ABSTRACT:

Organotin (II) properties of other gene schiff base ligand, tested for their effects on the reproductive system of albino rats. The same treatment at a dose level of 10 mg / rat / day produced significant weight loss of epididymides, seminal vesicles, and ventral prostate. Significant decrease in motility and density resulted in 100% self-mutilation. Significant changes (P <.01) were also found in the chemical limitations of the reproductive organs in the mice treated subjects compared with the control group. These results show that Organotin (II) derivatives are a natural remedy for the treatment of male rats, and ultimately lead to infertility.

KEY WORDS: Organotin, Antispermatogenic, Testes, Epididymides, Sterility

INTRODUCTION:

Rapidly increasing numbers and limited resources are considered to be the world's most pressing problems today. This rapid population growth has doubled the benefits of economic and technological development. Birth control is very important in maintaining satisfactory standards in developing countries. There is increasing international recognition of the need to control population growth. There is no need for an urgent need for affordable, safe, effective and universally accepted contraceptives. With the emergence of this effective method of contraception it is necessary that the process of both your reproduction, that is, male and female should be thoroughly investigated. The man, who is an integral part of the family, is greatly missed by the family organizers. Currently, efforts are being made to develop a male contraceptive, which can prevent birth defects without affecting access function and libido. In this work, a variety of synthetic elements have been tested in males of laboratory species of mammals [1,2]. The results are encouraging. Therefore, this approach could form the basis for future clinical management of male reproductive health. Inorganic chemicals have also been investigated and used for contraception only and have not been tested for toxicological effect [3-4]. A series of high-density Organotin (II) -containing nitrogen / oxygen cycles with ligands have been found to have important antitumour functions [5]. It has also been reported that diorganotin compounds containing the methyl / ethyl group cause loss of testicular cells in mice and in rabbits with decreased libido and impotency were observed in men working in the source [6]. Similarly N4 tetra amide ligands show extensive antimicrobial, antiinfigueatory, analgesic and antifertility activity. Also, the unique function of organotin compounds in chemical processes and chemical production has led to the integration of such structures and tested them for their anti-infertility and reproductive functions to contribute to the field of bioinorganic chemistry and their use in clinics. In this context the first-line communication is concerned with the synthesis, antitumor testing and efficacy of

the contraceptive plexes of organotin com plexes. Structures were assessed for their efficacy in biochemical and histopathological levels.

METHODOLOGY:

Laboratory-matched albino male rats were bred, the Wistar genus weighing about 150-175 g (90-100 days old) was used in the experiment. They are familiar with the typical conditions of a light black cycle (12L: 12D) with temperatures around $20 \pm 5 \circ C$ and 35% -60% relative humidity. Animals were given a normal diet of rats and ad -libitum water throughout the study. The animals were randomly assigned to three groups of six rats each. In the first control group, only olive oil (0.5 mL / rat / day) was given for 60 days. In the second group, affective administration of ligand Organotin (II) was given olive oil in equal doses (10 mg / rat / day) for 60 days. The fertility test for each male measurement was assessed by natural contact with two attractive individuals and women, before, during and after 55 to 60 days of treatment. The presence of cells in the vaginal smears was accepted as evidence of sequence. Married women were divorced and allowed to spend time together. The number of liters submitted was recorded and used as an indicator of male fertility. The body weight of test mice was observed throughout the study. All male test subjects were sacrificed under simple ether anesthesia, approximately 24 hours following the final dose. The last parts of the animal's body parts were inscribed. Blood samples were collected by heart piercing and the serum was separated by centrifugation. Testosterone is prescribed by Radio Immuno Assay. Epididymal motility and spermatozoa number to epididymides were also determined by the method of Prasad et al [7]. I, epididymides, and other organs of story access were extracted from surrounding tissues and connections were measured. Biochemical estimations of protein, sialic acid, glycogen, cholesterol, and fructose [8 - 9] are made internally, epididymides, and other organs of access. For histopathological testination, the tissues were prepared in Bouin's fluid and several parts were prepared and contaminated with haematoxylin and eosin. The power of the cell count is made using the "Camera Lucida" diagram. It was determined what the thickness of the tubular diameter meant. The various components of the testicular cell were analyzed in large quantities [10]. Differences between groups were compared using a single variance method (ANOVA), followed by two pairs of "T" variables were considered significant where there was a $P < .01$. All details are presented as insignificant $\pm$ SEM.

RESULTS AND DISCUSSION:

The component of Organotin (II) is synthesized (Scheme 1) and is produced in a reported manner [11]. administration of concomitant ligand, Organotin (II) reduces fertility in treated rat. The body weight of computer-treated rat was not affected during the experience. However, metals, epididymides, seminal -

Table 1: Effects of Organotin (II) compounds on body and organs weight in male rats.

Treatment	Final body weight (g)	Organs weight (mg/100 gbwt)		Ventral prostate
		Epididymides	Seminal vesicles	
Group-I Control	226 ± 5.23	590.23 ± 26	515.30 ± 13.60	325.87 ± 11.20
Group-II treated	$187.2^{ns} \pm 21.3$	$524.57* \pm 30.83$	$524.24* \pm 39.10$	$287.12** \pm 8.12$

All values are expressed as mean SE. ns: Nonsignificant

Level of Significance *P* P < .01; * P < .001 compared to control group

Table 2: Effects of Organotin (II) compounds on sperm motility and number in male rats.

Treatment	Sperm motility (%) Cauda epididymides	Sperm density (million/mL)		Fertility (%)	Testosterone ng/dL
		Testes	Cauda epididymides		
Group-I Control	64.12 ± 11.10	4.40 ± 0.36	41.43 ± 0.74	100 %(+ve)	4.98 ± 0.14
Group-II	$24.12** \pm 0.62$	$2.42* \pm 0.12$	$11.64** \pm 2.10$	100 %(-ve)	$2.34 \pm 0.26*$

All values are expressed as mean $\pm$ SE

Level of significance * P < .01; ** P < .001 compared to control group

Table 3: Effects of Organotin (II) compounds on biochemical parameters in male rats.

Treatment	Protein (mg/g)				Sialic acid (mg/g)				Glycogen (mg/g)	Cholesterol (mg/g)	Fructose (mg/g)
	Testes	Cauda epididymides	Seminal vesicle	Ventral prostate	Testes	Cauda epididymides	Ventral prostate	Seminal vesicle	Testes	Testes	Seminal vesicle
Group-I Control	252.06 ± 2.46	232.20 ± 1.82	228.40 ± 2.40	216.20 ± 1.10	5.10 ± 0.14	6.20 ± 0.10	5.24 ± 0.12	5.40 ± 0.18	3.20 ± 0.11	5.40 ± 0.24	4.48 ± 0.14
Group-II	$175.25** \pm 2.10$	$198..60** \pm 0.22$	$194.80** \pm 0.04$	$178.80** \pm 1.08$	$4.24* \pm 0.10$	$5.60** \pm 0.12$	$4.20* \pm 0.08$	$4.98.** \pm 0.08$	$2.24* \pm 0.11$	$10.24* \pm 1.56$	$3.42** \pm 0.04$

All values are expressed as mean $\pm$ SE

Level of significance * P < .01; ** P < .001 compared to control group

vesicles, and ventral prostate significantly reduced (P <.01) in treated mice than those in the control group (Table 1). The movement of spermatozoa, removed from the cauda -epididymides of treated rat was significantly more stressful compared to control animals (Table 2). The concentrations within and outside cauda- epididymides were significantly reduced (P <.01) in the control group (group II) compared with controls (Table 2). Significant loss of motility and density causes 100% explosion in treated rat . The testosterone level in the controlled groups decreased significantly (Table 2). Depressive effects of these compounds were observed (Table 3) in protein content and content of sialic acid, epi- didymides, and

other access organs. The glyco-gen testicular content and fructose content of gastric vesicles were also reduced, and testicular cholesterol was raised in this study. The ligand associated with the available iron, used in this study has led to weight loss and other access organs mainly due to a lack of hormones. produce male gametes and spermatogenesis site. Spermatogenesis is regulated by pituitary hormones (FSH, LH), which are secreted in the peripheral circulation by androgen, which are synthesized and secreted near sites identified within [12]. Therefore, epididymides, and other organs of androgen access depend on their growth and function. Weight loss will be followed by fatigue and constant tiredness. Decreased mobility may increase fertility [14]. Low concentration is associated with lower fertility. Spermato- zoa can use glucose and fructose [15 - 16]. Fructose is the main source of energy needed by spermatozoa. Results from this study show that the compound lowers fructose levels, because fructose inhibition and decreased motility were always associated [17]. Immobility can be caused by structural defects of the flagellum, for example, abnormal axonemal microtubular or defective mitochondria [18 - 19]. The results show a significant decrease in testicular glycogen. Such glycolytic inhibition may explain the reduced motility observed in vitro in the absence of lactate and private [20 - 21]. Significant decrease in glycogen content may result in protein synthesis and thus inhibit spermatogenesis [22]. The reliability and function of the membrane function are important for the functioning, and also, for the physical changes that occur over time during the fertilization process including energy, acrosome reactions, and binding pelvicida and oolemma [23]. Sialic acids are concerned with altering membranes.

The rate of spermatozoa inflamed and the increase in their fertilization capacity [24 -25]. Decreased sialic acid can therefore prevent the fertilization rate of. Since the above results can be concluded that it is based on Organotin (II) used in this study, it is able to reduce the reproduction of male rats perhaps by disrupting the process of spermatogenesis. These results are very consistent with previous reports of improved steel performance

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