

Study on Contraceptive Oral Pills on Reproductive Physiology of Female Albino Rat

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Abstract – Point and Objective: The point of this survey was to give a nitty gritty idea to the analysts on antifertility action of a few plants restraining male and female ripeness and might be formed into contraceptives. Regardless of numerous therapeutic plants have been professed to forestall ripeness, just couple of plants were so far been researched for their antifertility action. **Materials and Methods:** A broad bibliographic examination was completed by breaking down different traditional course books, logical diaries, counseling overall acknowledged data sets for giving reasonable data on antifertility therapeutic plants. Plant species generally utilized as contraceptives, abortifacients, emmenagogues, spermatogenics were considered as antifertility specialists. **Results:** Overall 233 plant species having a place with different families, generally utilized as antifertility specialists in the two guys and females has been incorporated in this audit. The different plant parts utilized in richness guideline incorporates leaves, natural products, roots, bark, stem and so forth All in all, unmistakably therapeutic plants assume a significant part as antifertility specialists. Notwithstanding of different financially accessible oral contraceptives on the lookout, home grown antifertility specialists shows promising yield by limiting the quantity of unfavorable medication properties. Ebb and flow research towards conventional medication is developing quickly due to its security and less expense utilization.

Keywords – Female, Albino Rat

INTRODUCTION

The disclosure of estrogen and progesterone and their potential contraceptive impacts prompted a huge measure of exploration on richness guideline in females. Oral contraceptive permits powerful and helpful family making arrangements for ladies and couple worldwide and has reformed the reproductive existences of millions of females. Current steroidal oral contraceptives are of two fundamental sorts for example (A) consolidated oral contraceptive and (B) Progestagen - just oral contraceptive.

(A) Combined oral contraceptive:- (COCS)

The primary oral contraceptive which was a mix of nestranol and norethyndrel was made accessible in May 1960 in the U.S.A. Joined oral contraceptive operates by mix of immediate and aberrant impacts. The essential activity is concealment of ovulation by hindrance of pituitary follicle invigorating chemical (FSH) and luteinizing chemical (LH), subsequently forestalling follicular maturation and ovulation. Likewise thickening of cervical bodily fluid (primarily due to progestagen) presents a hindrance to sperm penetration. The receptivity of endometrial to the impact sore is likewise diminished. Monophonic joined oral contraceptives are mixes of estrogen and progestagen taken in steady sums either for 21 days,

trailed by a time period days, or for 22 days, trailed by a timespan days. During the span, either no pills (without pill stretch) or fake treatment pills are taken. Multiphase joined oral contraceptive (biphasic and triphasic) are an alteration of the consolidated oral contraceptive where changing blends of estrogen and progestagen are utilized all through the cycle, with a lower all out month to month steroidal portion.

(B) Progestagen only oral contraceptives

Progestagen just oral contraceptives containing a low portion of progestagen. They are taken persistently through the cycle without a break between cycles. The quick activity of progestagen just pills is to thicken cervical bodily fluid, which at that point presents a snag to sperm penetration. Likewise, ovulation is hindered in a high extent. There are extra changes in the endometrium which make it negative to implantation; anyway the initial two impacts make treatment profoundly impossible. The utilization of progestagen - just contraception might be considered since progestagen don't meddle with lactation. Progestagen just pills that contain just progestagen regularly called "smaller than usual pills", repress ovulation. Their

essential system of activity is thickening of the cervical bodily fluid. This impact happens with long periods of taking a progestagen sleek pill and tops around four hours after the pill is taken. Be that as it may, the cervical bodily fluid remaining parts thickened for just around 20 hours which makes the progestin just pill less compelling during the most recent couple of hours before the following portion (Wallach et al 2030). The estrogen part of joined oral contraception is either ethynodiol or mestranol and the progestagens utilized are cyproterone acetic acid derivation, desogestrel ethynodiol dictate, gestodene, levonorgestrel, lynoestrenol, megestrol, norethisterone, norethisterone acetic acid derivation, norethynodrel, norgestimate and norgestrel. Presently utilized estrogen is ethynodiol and ordinarily utilized progestogen is norethisterone. Crisis contraception pills can be taken after unprotected sex to help forestall accidental pregnancy. They contain a portion of similar chemicals as pills utilized for every day oral contraception. To utilize progestagen just pills for crisis contraception, a ladies should take a sum of 0.75 mg of levonorgestrel with 72 hours after intercourse and afterward a second portion of 0.75 mg 12 hours after the fact. To utilize consolidated oral contraceptive for crisis contraception, a ladies should take pills adding up to 0.5 mg levonorgestrel (or 1.0 mg norgestrel) and 100 jag thinly estradiol within 72 hours after intercourse and a similar portion 12 hours after the fact.

Professionals may not leaves been persuaded by this technique for two reasons. First and foremost, the genuine efficacy of the technique was hard to assess Analysis of ongoing clinical preliminaries proposes that when begun inside 72 hours of unprotected intercourse it forestalls about 74% of pregnancies (Trussell et.al., 1996), and along these lines is impressively less powerful than other, contraceptive strategies, also, it has unsavory results. About portion of the clients report queasiness and in any event 20% experience regurgitating (Task power on post-ovulatory strategies for fruitfulness guideline, 1998). At present, dosages of progestagen in the norethisterone family norethisterone, norethisterone acetic acid derivation, ethynodiol diacetate and lynestrenol range structure 0.4 to 2 mg. Pill containing the more powerful progestins, levonorgestrel, desogestrel and gestodene in the portions of 0.05 to 0.15 mg. The various progestins have somewhat distinctive physiological impacts, cooperate contrastingly with estrogens, potentially adjusting the impacts of the two chemicals (Brooks, 1984; Tikkanen and Nikkila, 1986). Previously, the estrogen portion in oral joined contraceptive pills has diminished from more than 150^μg of ethynodiol to 35 ^μg or less. The most widely recognized low-portion oral joined contraceptive pills presently contain close to 35^μg of ethynodiol. Albeit a few oral contraceptive pills contain 50 ^μg of ethynodiol, these pills are not utilized rountinly in light

of the fact that they are related with an expanded danger of thromboembolic illness.

The enormous forthcoming study has uncovered that the danger of both venous and blood vessel thromboembolic illnesses during admission of oral contraceptives ascends with the portion of estrogen segment. There was additionally a portion subordinate connection between the progestagen part and the danger of blood vessel sicknesses (Meade, 1988). Wilson et al, (1984) found that the genuinely critical expansion in pulse in ladies taking consolidated oral contraceptives with 50 mg of estrogen or more. Expanded arrived at the midpoint of around 6 mm Hg for systolic pulse and 2 mm Hg for diastolic circulatory strain (Shen et al., 1994). Studies have announced commonly equivalent expansion in circulatory strain among clients of low portion consolidated oral contraceptives also (Wilson et al., 1984). Quinestrol (3 - cylopentyl ether ethynodiol) is an estrogen subsidiary utilized as contraceptive or as replacement treatment in menopausal ladies. In 1978, Givia et al., studied the hepatic capacity in female rats given 200 (ig of quinestrol like clockwork for upto 210 days and saw that quinestrol influenced liver weight, serum cholesterol levels, biliary motion and furthermore expressed that the impacts of quinestrol on hepatic capacities are like the impacts of other estrogen subordinates.

Oral contraceptives have been related with changes in carbohydrate digestion and with expanded danger of nerve bladder infections and non-malignant liver tumors. Oral contraceptives most likely don't cause gallbladder infection, yet rather they may accelerate the advancement of gallstones in effectively helpless ladies. Gallstones are brought about by unusually high saturation of bile with cholesterol. Cholesterol saturation is higher in oral contraceptive clients than nonusers, conceivably because of estrogen (Wingrave and Kay, 1982; Snowball and Taylor, 1985;) The conceivable of job oral contraceptive in the advancement of bosom malignancy has been bantered for more than forty years. Some bosom malignant growths are chemical ward and disease is an undeniably basic reason for death among elderly people ladies. In this manner numerous investigations have looked to discover what oral contraceptive use means for the danger of creating bosom malignancy (Westholt, 1996). Various case control studies in created nations have distinguished expanded dangers of uncommon liver disease, hypatocellular carcinoma in oral contraceptive clients (Stephenson, 1998; Yu et. al., 1991). These examinations announced danger among oral contraceptive clients around 2 to multiple times more noteworthy than hazards among nonusers. Consolidated oral contraceptives presumably help to ensure endometrial and epithelial ovarian malignant growths by decreasing the rate of cell division in the endometrial covering

and the ovaries. On account of the uterine endometrium, the progestin segment in the pill is thought to check the impacts of estrogen, which would some way or another empower cell division. Oral contraceptives may ensure against ovarian malignancy by decreasing gonadotrophin creation of the pituitary organ, subsequently lessening the impacts of gonadotrophin incitement of the surface cells of the ovaries (Casagrade et. al., 1979; Pike; 1987)

THE MODEM SCIENARIO OF CONTRACEPTION

A) Immunocontraception

The commitments of Indian researchers towards the improvement of an immunocontraceptive for ladies are impressive. First among this is the commitment of Talwar and Colleagues in the improvement of an immunization for actuating, against hCG antibodies. Stage - II preliminaries utilizing hetero species dimer - hCG antibody high adequacy with one pregnancy in 1,224 cycles (Talwar et. al., 1997). A biodegradable framework utilizing microspheres for conveyance of the immunization has been accounted for (Singh et. al., 1995). Riboflavin - transporter protein (RCP) has been tried as antigen to stifle treatment in creature models (Karande and Adiga, 1991). Dynamic inoculation with denatured RCP decreased fruitfulness of rats and monkey especially (Adiga et. al., 1997). Gupta and his partners (1995) have utilized epitopes of zona pellucida glycoprotein to build up an immunocontraceptive. Fruitlessness was instigated in female hood monkeys by vaccination with zona pellucida glycoprotein - ZP3 and recuperation was acquired when counter acting agent declined (Gupta et. al., 1995; Kaul et. al., 1996).

REVIEW OF LITERATURE

The Chemical substance in contraceptive oral pills are Known to deliver huge number of hormonal and biochemical alterations. The pen: herald activity of the contraceptive assumes just a negligible part, whereas the cerebral movement causes imbalance of the hypothalomo-pituitary - ovarian pivot which changes the instruments managing the arrival of gonadotrophins from the pituitary and the combination and arrival of GnRH by hypothalamic neurons (Perez - Lopez et. al., 1975). The steady amounts of chemicals in these pills are adequate to counteract the distinctive positive and negative inputs on the nerve center and pituitary, denying these focuses of the motivations important to incorporate and deliver in a cyclic way the chemicals included during ovulation (Dericks - Tan et. al., 1976 a; Misbelief et. al., 1977).

Prez-Lopez et. al. (1982) detailed a huge decrease in the LH response to GnRH incitement in ladies on utilization of steroid contraceptives. The restraint of

gonadotropins with low dosages of ethinylestradiol isn't simply because of the impact of estrogens, yet in addition because of the synergisms emerging from the relationship of the two sex steroids (Nippolt et. al. 1989).

During 6 patterns of treatment in 19 ladies, Kuhl et. al., (1992) examined the impact of a low-portion biphasic oral contraceptive containing 40 μ g ethinylestradiol + 25 μ g desogestrel (7 tablets) and 30 μ g ethinylestradiol + 125 μ g desogestrel (15 tablets) on different hormonal boundaries and glucose digestion and found that there was a decrease in gonadotrophin discharge and ovarian steroid combination. Fasting level of glucose and insulin didn't change altogether, yet the glucose load uncovered slight impairment of glucose tolerance.

It is currently grounded that in numerous ladies who utilize low - portion joined oral contraceptives, there is a variable level of restoration of endogenous ovarian capacity during the without pill span (Guillebaud, 1987) and estradiol rise (Smith et. al., 1986; Killoch et. al., 1987), yet additionally in numerous ladies sequential ultrasound checking of the ovaries shows normal return of follicular development (Malloy et. al., 1985).

In human affected by Nomegestrol acetic acid derivation, ovulation hindrance is consistent and LH and progesterone levels are consistently discouraged at day by day dosages going from 5 to 1.25 mg at the uterine level, it acts similar as progesterone by restricting to cytosolic progesterone receptors of the endometrium (Bazin et. al., 1987).

Labhsetwar (1966a) tracked down a huge lessening in pituitary LH stores of unblemished female rats treated with nnedroxyprogesterone acetic acid derivation. Others have utilized ovariectomized rats and/or measures which don't separate between follicle animating chemical (FSH) and luteinizing chemical (LH) (Saunders, 1964; Husain and Pincus, 1965).

Labhsetwar (1967) contemplated the impacts of norethynodrel (20. μ g/rat or around 0.1 mg/kg day by day) on the pituitary luteinizing chemical (LH) levels and found that when the steroid is managed, the estrogenic segment IS primarily engaged with the pituitary LH restraint.

Dericks-Tan et. al., (1976a) showed that, both joined and successive oral contraceptives were found to meddle with the limit of the pituitary to react to LH-RH with an arrival of LH and FSH. This hindrance was discovered to be decreased by around half when "low-dosed" oral contraceptives are given, and ladies taking different minipills showed pretty much ordinary responses. The pituitary square goes on for

roughly 3 weeks subsequent to suspending the utilization of oral contraceptives.

Dericks - Tan et. al. (1976b) recommended that pituitary square delivered by oral contraceptive steroids is a portion related marvel. Be that as it may, Wan et al., (1978) discovered distinctive LH reaction with two unique specialists proposed: a) ethinyl estradiol (50 μ g) as a more grounded suppressant than metranol(50 μ g)and b) norgestrel (0.05 mg) may potentiate the suppressive activity of ethinylestradiol.

Wan et. al., (1978) saw that there is no distinction between the long - term and short - term oral contraceptive gatherings and furthermore showed that the normal reaction to LH-RH incitement contrasts in patients who are taking diverse oral contraceptive specialists.

Cohen and Katz (1979) considered pituitary and ovarian capacity in ladies accepting hormonal contraception. They saw that on dynamic preparation, basal luteinizing chemical, follicle animating chemical and estradiol were essentially smothered gonadotrophin reaction to gonadotrophin delivering chemical was additionally discovered to be altogether stifled. In any case, by day 28 (after culmination of the inert tablets), basal gonadotrophin and estradiol concentrations and gonadotrophin reaction to gonadotrophin delivering chemical were not fundamentally extraordinary to their pretreatment levels.

The everyday portion of norethynodrel (about 0.1 mg/kg) block ovulation, fruitfulness and nidation in the grown-up rat (Saunders, 1964; Desaulles and KrahenbubL 1964). Pseudopregnancy in the rat is known to bring about expanded pituitary LH stores (Schwartz and Rothchild, 1964; Van - Rees and DeGroot, 1965) and norethynodrel has been found fit for initiating psuedopregnancy in the cyclic rat (Labhsetwar, 1966b). The LH level in the norethynodrel treated gathering (3.7 f. μ g/mg) is tantamount to that found on days 7 to 8 of pseudopregnancy (3.3 ug/mg) (Labhsetwar, 1967).

Scott et. al., (1978) tracked down that contraceptive details containing ess that 50(. μ g of estrogen have a lesser suppressive impact on LH discharge than do definitions containing 50 μ g of estrogen or more. The basal prolactin (PRL) reaction as well as the most extreme prolactin response to thyrotropin - delivering chemical were discovered to be altogether more prominent in subjects utilizing oral contraceptives than in the control subjects. The exogenous estrogens, especially as oral contraceptives (OCs), may bring about pituitary adenomas as frequency of these tumors have expanded as of late, especially in young ladies, parallelling the expanded utilization of oral contraceptives (Annegers et al., 1978). This pattern is reliable with the tracking down that the administration of exogenous estradiol is accompanied by expanded coursing of human prolactin in ordinary

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Givner and Rocherfort (1972) demonstrated diminished adrenal capacity in rats as shown by adrenal atrophy, diminished serum and adrenal corticosterone and lip - hydroxyprogesterone to corticosterone because of medroxyprogesterone acetic acid derivation. Kitay (1963) showed that estrogen treatment expanded the pituitary substance of ACTH and that the adrenal venous corticosterone creation in the female rat is a lot higher than in the male. Rushmann - Wennhold and Nelson (1970) revealed that adrenal homogenates from flawless female rats treated with estradiol - 17(i-hydroxylate have more deoxycorticosterone to corticosterone than the benchmark group. Goldzieher et. al., (1977) considered the impact of ethinyl estrogens utilized in oral contraceptives, with and without progestational specialists on plasma Cortisol and Cortisol restricting in human primates and beagles and found that there was an exceptionally slight expansion altogether and free Cortisol levels in people and oaboon, none in canines. Of the three (i.e. Megestrol acetic acid derivation, norethindrone acetic acid derivation dlnorgestrel) progestational mixtures, norethindrone acetic acid derivation and norgestrel created a slight decline in all out Cortisol, whereas magestrol had no impacts in people. The free Cortisol was unaltered by these mixtures. In both the primate and the canine, the reaction was perplexing, and unique in relation to that found in human subjects.

Goldzieher et. al., (1978) additionally considered the impacts of ethinylestradiol or mestranol with and without a progestational compound (norethindrone acetic acid derivation, dl - norgestrel, megestrol acetic acid derivation) on plasma androgens and their limiting were analyzed in grown-up ladies, female monkeys and beagles and tracked down that in human subjects, the

estrogens expanded absolute testosterone and testosterone restricting and diminished free testosterone. In primates, estrogens created a transient decline in absolute testosterone and an expansion in restricting. The degrees of progestational specialists utilized didn't influence absolute testosterone in people, as is generally observed with business specialists, yet diminished in monkeys. Rate restricting was diminished in the two species by the 19-nor builds, yet not by megestrol. Androstenedione levels were unaffected in human subjects yet impacts of the two estrogens and progestins were found in monkeys. Oral contraceptives increment the creation and serum concentrations of sex chemical restricting globulin, bringing about lessened concentrations of free testosterone and estrogen, a restraint of gonadotropin emission and a further abatement in ovarian androgen discharge (Burkmann, 1995).

Wiegratz (2003b) additionally found that there was a critical expansion in tri-iodothyronine (T3) and thyroxine (T4) by 20-40% in all treatment cycles, while thyroid-invigorating chemical was essentially expanded distinctly with EE/EV/DNG. Treatment with the DNG - containing oral contraceptives caused no adjustment of free T4 (FT4) and a brief decrease in free T3 (FT3) levels during the primary cycle. During admission of EE/LNG, FT4 rose marginally while FT3 was not adjusted. The articulated ascent in the serum concentrations of Cortisol seemed, by all accounts, to be identified with the EE portion. They likewise proposed that the three DNG - containing and the LNG - containing low-portion oral contraceptives may expand T3, T4 and cortisol to a raised restricting to serum globulins, while the free extent of the chemicals isn't or just somewhat changed.

The concealment of all out testosterone by 30 - 40% has been seen during treatment with numerous oral contraceptives (Wiegratz et. al., 1995; Coenen et. al., 1996). It is proposed to be brought about by both a decrease of gonadotrophin discharge and a quick immediate inhibitory impact of sex steroids on ovarian and adrenal steroid blend (Aden et. al., 1998; Fern et. al., 1978)

Edward et al., (1972) saw that endogenous estrogen has a job in intervening the stimulatory impacts of HCG and FSH on the ovary. Electin et. al., (1976) saw that the contraceptive activity of low - portion contraceptive (30(ig, 17a - ethinylestradiol + 1 SO(ig d-norgestrel) is intervened through concealment of ovulation and by delivering the cervical bodily fluid impenetrable to sperm. Vander-Vange et al., (1990) considered the impact on free testosterone by utilizing the oral contraceptive biphasic preparations and they observed a fall in absolute testosterone and the sex chemical restricting globulin. Hedon et. al., (1992) tracked down that ovarian blockage by an oral contraceptives stay proficient even following a few days of oral contraceptives misses. Apparently the negative retrocontrol impact of the estro-

gestogen is more impressive than the positive criticism of the ovarian estrogens that are viewed as the setting off factor in the Luteinizing chemical (LH). A few ladies, nonetheless, have less proficient negative criticism and might be more in danger for folliculogenesis supported by sporadic admissions of oral contraceptives.

In numerous nations, lactation is the babies just wellspring of nourishment and assurance against disease. A few ladies, including the individuals who are bosom taking care of their babies, incline toward oral contraceptives. However there is worry about utilization of consolidated oral contraceptives during lactation on the grounds that numerous examinations have shown that lactation might be debilitated by joined oral contraceptives during lactation (Koetsawang, 1987).

Metabolic impacts of the progesterone are fundamentally founded on their fondness and activity to androgenic, glucocorticoid and mineralocorticoid receptors in different objective organs (Follow et. al., 1989). Progestogens and estrogens in oral contraceptives have halfway restricting consequences for the digestion of plasma lipoprotein (Fotherby and Caldwell, 1994). Godslan et. al., (1990) announced that oral contraceptives containing desogestrel and the most reduced portion of norethindrone, raised high thickness lipoprotein (HDL) - cholesterol levels. Essentially, oral contraceptives containing desogestrel and the most minimal portion of norethindrone were similarly compelling in bringing down low thickness lipoprotein (LDL) - cholesterol levels. Marz et. al., (1990) detailed that contraceptive containing a mix of ethinyl estradiol and either gestodene or desogestrel expanded serum concentrations of complete cholesterol and HDL - cholesterol.

Scharnagel et. al., (2004) considered the impacts of two monophasic oral contraceptives containing ethinylestradiol 20(ig in blend with levonorgestrel 100ng(30EE/LNG100) or 20(ig and 150ug (EE30/LNG150), separately on lipoprotein digestion and examined that, absolute cholesterol (- > % to +7%), apolipoprotein (apo) B (+21% to +29%) and low - thickness lipoprotein (LDL), cholesterol (+7% to +17%) expanded somewhat. High - thickness lipoprotein (HDL) cholesterol diminished somewhat (- 11 % and - 5%) HDL fatty substances expanded (+16% and + 26%).

Brill et. al, (1996) discovered essentially higher increments of fatty oils in the gathering given the higher ethinylestradiol portion (+64%, contrasted with + 21 %), supporting that the impact on triglyceride digestion of an oral contraceptive identifies with its estrogenicity. Ho in 1990, showed that there was a critical expansion in the serum absolute lipids and complete cholesterol: HDL - C ratio and a huge decline in the serum

HDL - C levels in understanding taking the oral contraceptive pills containing 30 μ g ethinylestradiol and 0.15mg levonorgestrel. When levonorgestrel and estrogen are utilized in mix, levonorgestrel has antiestrogenic and androgenic impacts and is known to bring down aggregate and HDL cholesterol and expansion in LDL cholesterol (Silverstone et al., 1979; Hirvonen et. al., 1981 ; Tikkanen et. al., 1982). Diana et al, (1990) additionally revealed that the impacts of the triphasic and monophasic contraceptive preparations of levonorgestrel and ethinyl estradiol on the lipid and lipoprotein digestion rely upon the concentration of the estrogen and progestogen parts. The monophasic preparation, being more androgenic, diminishes aggregate and HDL cholesterol undeniably that the triphasic preparation.

The likelihood that the danger of atherosclerosis inconvenience increment with oral contraceptive use was inspected by studying the impact of oral pill containing estrogen and progestin on the metabolism of lipids in female rats and discovered the expansion cholesterol level in plasma and aorta (Sissan and Leelanima, 1994). One of the results of oral contraceptives is change in lipid and lipoprotein digestion it is one of the danger factors for the advancement of cardiovascular illnesses (Miller and Miller, 1975; Mann et. al., 1976). Peterson et al., (1966); Goldman et. al., (1969) revealed that irregularities of carbohydrate digestion initiated by oral contraceptives were reversible on withdrawal of the medication. Both the estrogen and progestational constituents of oral contraceptive may influence carbohydrate digestion separately or synergistically. (Kalkhoff, 1970; Vermulen et. al., 1970; Adams and Wynn, 1972). William et. al., (1994) examined the impacts of gestodene and ethinyl estradiol containing oral contraceptive on carbohydrate digestion and they tracked down that oral contraceptive containing 75 μ g of gestodene and 30 μ g of ethinyl estradiol can fundamentally adjust carbohydrate digestion in more seasoned ladies.

RESEARCH METHODOLOGY

EXPERIMENTAL ANIMAL MODEL:-

The current study was completed in wistar female albino rats weighing about 125g \pm 2 g. The creatures were secured from National Institute of Nutrition (NIN), Hyderabad. Creature tests were led by "INSAEthical rules for utilization of creatures for logical exploration subsequent to getting authorization from moral council". The creatures were kept in vivarium all through the time of analysis. They were consistently benefited from standard pellet diet given by National Institute of Nutrition, Hyderabad and water advertisement labium. The leftover food and waste matter was taken out from the pens on the following day and legitimate consideration was taken to stay away from any contamination. Just solid rats were utilized for the

current trials. Estrous cycle of female rats was seen by day by day assessment of vaginal smear cytology. Just the female rats showing at any rate two sequential estrojs pattern of 4-5 days duration were chosen for the current study. Trial creatures were accustomed fortification evening. Subsequent to recording their underlying body loads, they were separated into two fundamental gatherings, 1) Control and 2) Experimental. The confines of rats of both the genders were kept next to each other to keep away from Boot and Lee impact. In any case, the females were kept grouped through the trial period.

RESULTS

The female albino rats were taken care of with explicit portions of steroid and non-steroidal contraceptive pills for 30 days. During this trial period no mortality was seen in all female aibino rats controlled orally with vehicle, steroid joined oral pill (ethinylestradiol + norgestrel) and non-steroidal oral pill (Centchroman) seperately.

Effect of oral administration of steroid and non-steroidal contraceptive pills on the body weight :-

Upon oral administration of steroid (ethinyl estradiol + norgestrel) and non-steroidal (Centchroman) oral contraceptive pill seperately for 30 days, the female rats showed critical changes in their body loads. The female rats of control bunch were given equivalent measure of vehicle for 30 days. The body loads of these rats were found to increment bit by bit during 30 days.

CONCLUSION

The female albino rats of around same age and weight were taken care of with three distinct portions (0.14, 0.21 and 0.43 mg/ml/rat/day) of steroid pills containing meagerly estradiol and norgestrel for 30 days and three unique dosages (0.29, 0.43 and 0.87 mg/ml/rat/day) of non-steroidal Centchroman oral contraceptive pills for 30 days. A comparative biochemical and histological examinations were done. The rate of gain in the body weight was diminished in every one of the gatherings treated with steroid pills just as Centchroman showing some unfriendly impacts on the rats. Different portions of Centchroman caused a reformist diminishing in the heaviness of the uterus. The progressions in the biochemical concentrations of the uterus, be that as it may, didn't show any steady example. The impact of Centchroman.

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