



RESEARCH ARTICLE.....

# Effect of GnRH treatment on conception rate and blood biochemical profile of post-partum acyclic surti buffaloes

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**ABSTRACT.....** Postpartum acyclic surti buffaloes of an organized farm confirmed by twice per-rectal palpation 11 days apart from 45 days postpartum were treated with 5ml of inj. Buserelin acetate I/M route in first group (n=6) and 5ml of inj. Buserelin acetate I/M route along with 5 ml inj. Vit. AD<sub>3</sub>E preparation and 15 ml inj. Toldimphos sodium preparation I/M route in second group (n=6) on 55 days postpartum after confirmation of acyclicity. Keeping 6 animals of same status as control to see the oestrus induction response and conception rate including weekly evaluation of blood biochemical, metabolic and mineral profile, just before (0 day) treatment and 3 weeks after treatment (7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> days post-treatment). The service period and oestrus induction interval in days was found significantly lower (p>0.05) in GnRH treated T<sub>1</sub> (71.17±4.42; 12.67±1.11 days) and T<sub>2</sub> (70.83±3.80; 12.33±1.11 days) groups as compared to T<sub>3</sub> (94.50±5.43; 30.75±3.95 days). Moreover, cent per cent conception rate in T<sub>1</sub> (GnRH alone) and T<sub>2</sub> (GnRH + Vit. + P) groups as compared to 66.66 per cent conception rate in control groups, respectively might be under the influence of various treatments in period (45 to 120 days) with overall 88.89 per cent (16/18) conception rate. The overall mean serum glucose values in T<sub>1</sub>, T<sub>2</sub> and Control (T<sub>3</sub>) groups were 63.63±1.91, 62.08±2.38 and 60.39±1.80 mg/dl, respectively. The overall serum glucose values did not differ significantly (p>0.05) in T<sub>1</sub>, T<sub>2</sub> and T<sub>3</sub> (Control) groups. Similarly, total protein (7.44±0.18, 7.74±0.47 and 7.28±0.16 g/dl), total cholesterol (120.37±3.11, 119.39±3.41 and 115.40±2.94 mg/dl), calcium (10.01±0.21, 10.19±0.17 and 10.04±0.05 mg/dl), phosphorus (5.96±0.20, 6.01±0.14 and 5.90±0.18 mg/dl) values did not differ significantly (p>0.05) in T<sub>1</sub>, T<sub>2</sub> and T<sub>3</sub> (Control) groups.

**KEY WORDS.....** Biochemical profile, Conception rate, Acyclic surti buffaloes, Hormone therapy

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