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Bos indicus cow urine: Comprehensive and holistic approach in treatment of cancer

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Abstract
Indian cow fresh Urine/ Ark has been widely used in Ayurved since thousands of years. In this observational study 50-100 ml per day of fresh Gomutra of healthy Indian cow was used. Terminally ill biopsy proved cancer patients were enrolled. Clinical response (subjective & objective) evaluation was done. In this study we found that it gives either partial response or stabilize disease for a period of 4-6 months and survival of 6-12 months in 60% of cancer patients. Indian life style quality of life maintained in more then 75% of patients. This helped poor patients as it reduces cost of treatment. This comparison was done as per same organ, site, stage & pathology of cancer patients treated by either of palliative Chemotherapy / Radiotherapy / surgery or combination and those who used only cow urine therapy.
In another group of patient who were on regular treatment of Radiotherapy (conventional fractionation curative schedule) and Chemotherapy (Taxane, 5 FU, Cisplatin-conventional 21 days cycle) were treated by cow urine after their voluntary enrolment. Toxicity grades of radiotherapy and haematological chemotherapy grades were observed. We found that patients using cow urine had less severe toxicities (majority grade I & II) as compare to non-users (majority grade II & III).

Keywords: Anti-cancer, Allopathy, Gomutra.

Introduction
Bos Indicus is an Indian origin cow. Its urine has been used since thousand of years for medial application and has been described in Ayurved. Its anticancer role is described and explained in shaligrama nighantu (p-1034). It has also been described in Damar Tantra (Lord Shiva and Goddess Parwathy shloka-107), rigveda (10-15), shrushuta sanhita (45/221), charak sanhita (100), shaligram nighantu (p-1034). U.S.FDA patent has been given for its antibiotic, Bioenhancer of anti-infective action, anticancer agent, nutrient and protective repairing of DNA from oxidative damage. It increases the potency of anti-cancer drug Taxol (paclitaxel) against MCF-7, a human breast cancer cell line in invitro study. Indian cow urine is used as medicine for cancer treatment. DNA damage repair and anticancer effects are associated with free volatile fatty acids and antioxidant properties. Its phenolic compounds, uric acid & Allentoin produces antioxidant effects and entraps the free radicals. Experiments shows that cow urine has immune modulatory response including humeral and cell mediated immunity. It enhances B & T lymphocytes blastogenesis and IgG, IgA & IgM antibodies level in blood. Its protein content interferon also acts as an anticancer agent. Trace element aurum (gold) found in cow urine also has anticancer activity. Anti-cancer properties are associated with decrease in carcinogenesis, decrease in cell proliferation (cell growth), increased apoptosis, decreased tumor neo angiogenesis and cancer cell death. In terms of therapeutic gain cow urine has toxic effect on cancer cells as compare to relative protective effect on normal cell.

Material and Methods
Healthy Indian cow is used for collection of fresh gomutra. All laboratory tests of this cow including blood, urine and cow dunk done to see if it has any pathogenicity. It is usually collected in non-metallic container and aseptic precautions maintained. Then it is filtered through 16 layer of cotton cloth. This is used within 4 hours after collection. 50-100 ml dose given to patients in the morning and evening and avoided any food before and after drinking for a period of 30 minutes. It was given regularly daily till patient was is in the study/ survives. Biopsy proved terminally ill cancer patients in palliative group with signed consent were enrolled for this study.

Patients enrolled for radiation and chemotherapy toxicity with use of Indian cow urine were volunteer (with consent). Patients treated by regular radiotherapy (conventional dose 200 cGY per # 5 days a week/60-70 GY/50-60 days/30-35#) were observed for radiation toxicities after completion of radiotherapy. Clinical radiotherapy toxicity grades were used for evaluation. Patients on chemotherapy (Taxane, 5 FU, Cisplatin-conventional 21 days cycle) were evaluated for haematological toxicities. Clinical toxicity grades were used. These groups of patient were compared with same pathology, stage, site of cancer (primary & metastasis). Previous treatment if any was recorded. Survival, quality of life and cost of treatment was also compared with patients of same pathology/ site/stage of cancer.

Table: 1 Treatment response and survival (terminally ill cancer patients)

S.No	Site	Treatmnt (383)				Clinical rsponse Cow urine (169)		
	Patient (552)	CT/RT	CT/RT/S	CT/S	Survival Month	PR	Stable	Survival Month
1	Ent	78	22	-	14	10	18	13
2	Git	9	9	-	9	8	8	8
3	Hemato	32	8	-	5	7	9	6
4	Penis	1	3	-	5	4	5	6
5	Uterus	-	11	-	6	3	5	7
6	Ovary	-	-	20	5	5	7	7
7	Cervix	97	-	-	5	7	11	8
8	Breast	14	47	-	12	15	17	15
9	Prostate	-	13	-	15	5	6	17
10	Brain	-	13	-	5	0	8	5
11	Un. Prim.	-	6	-	4	6	5	7
12	Total	231	132	20	-	70	99	-

PR- Partial Response, CT- Chemotherapy, RT- Radiotherapy, S-Surgery

Table: 2 Chemotherapy: Haematological toxicity & cow urine (Cisplatin, 5FU, TAXANE, D1-D21 Protocol)

S.No	Toxicity	Control Group (212) Toxicity Grade			Cow Urine Group (210) Toxicity Grade		
		I	II	III	I	II	III
1.	Anaemia	12	192	8	162	47	1
2.	Thrombocytopenia	15	186	11	177	30	3
3.	Leucopenia	22	161	29	153	51	6

Table: 3 Radiotherapy toxicity and cow urine (Conventional dose - 60Gy/30#/200cGY/#/5days/week/50-60days)

S.NO	Toxicity	Control Group (212) Toxicity Grade			Cow Urine Group (210) Toxicity Grade		
		I	II	III	I	II	III
1.	Skin Reaction (Ent, Pelvis, Breast =216)	28	132	56	136	74	6
2.	Mucosal Reaction (ENT =56)	8	34	14	36	15	5
3.	Xerostomia (ENT = 56)	11	33	12	30	19	7
4.	Dysphasia (BREAST=41)	8	33	-	37	4	-
5.	Radiation Cystitis (PELVIS =55)	12	43	-	48	7	-
6.	Radiation Proctitis(PELVIS=55)	16	39	-	50	5	-

Table: 4 Minimum cost of treatment (Terminally Ill Cancer Patients)

S. NO	Site of caner	Control group (ct+rt+s) (rupees)	Cow urine user (rupees)
1.	Head And Neck	1 Lakh-1.5 Lakh	50000/-
2.	Git	1 Lakh-1.5 Lakh	50000/-
3.	Hamatological	75000 - 1 Lakh	50000/-
4.	Penis	75000 - 1 Lakh	50000/-

5.	Uterus	50000 - 75000/-	50000/-
6.	Ovary	75000 – 1 Lakh	50000/-
7.	Cervix	50000 – 1 Lakh	50000/-
8.	Breast	75000 – 1.5 Lakh	50000/-
9.	Prostate	75000 – 1.5 Lakh	50000/-
10.	Brain	1 Lakh – 1.5 Lakh	50000/-
11.	Unknown primary	50000 - 75000/-	50000/-

Discussion

Indian cow urine in this study was used in terminally ill cancer patients as best supportive care, palliative treatment. In all patients either stable disease or partial response at primary/ metastatic site was observed. Overall survival was compared with those who received radiotherapy/chemotherapy/surgery (any of these). Although this group had better clinical response at disease site but overall quality of life, was inferior than cow urine user group. Overall survivals of both group patients are almost similar. Cost of treatment (considering minimal cost) was less in cow urine user group. Hospital stay was very less in cow urine user group. Quality of life in RT/CT/S - treated group was initially good but later due to toxicities and systemic effects of drugs leads to deterioration of general condition of the patients where as in cow urine user group it was better. In another group of patients who were treated by conventional dose curative radiotherapy/ chemotherapy, Haematological and radiation toxicity grades are patient friendly in cow urine user group as compare to those who did not use.

Conclusion

In the given dose of Indian cow fresh urine, we found either stable disease or partial response at primary/ metastatic cancer site. This group also had better quality of life and relatively low cost of treatment. Also we found that overall survival of cow urine user group is not inferior then allopathy cancer targeted treatment group (RT/CT/S). We conclude that cow urine therapy in terminally cancer patients is beneficial and also gives easy terminal life. However in emergency condition sometimes allopathy palliative treatment may help to improve quality of life.

In another group of patients chemotherapy induced haematological toxicity grades and radiotherapy induced toxicity grade were reduced by cow urine therapy, i.e. severity of these adverse effects are reduced. It helps in prevention of cancer treatment related toxicities.

However we suggest that large studies should be done with a prospective clinical design studies for anti-cancer activity as well as toxicity prevention related problems using Indian cow urine therapy. Animal model studies and invitro cancer cell line studies are also required to understand the exact mechanism of the active ingredients of Indian cow urine having anti-cancer activity. Also required is to validate and standardise the formulation, dose and route of administration of cow urine therapy.

Precautions

1. This is a selection bias study of terminally ill cancer patients. Chemotherapy /Radiation toxicity group of patients were of regular curative group of anti-cancer treatment.
2. This study was conducted under supervision of qualified Allopathy Oncologist and Ayurved Physician.
3. Only fresh cow urine of medically tested healthy Indian cow with healthy feeding was used. Minimum dose volume was used.
4. Taste, feeling of nausea, vomiting, eye/nose burning (pungent smell) etc are initial adverse effect of fresh cow urine and are managed mostly by counselling only.
5. Randomized, blind, multicentric clinical study required. Cow urine chemistry validation, dose formulation and route of administration standarization are also required.

Disclaimer

This clinical study on terminally ill cancer patients was done with permission of Raj. Go Seva Ayog, Govt. of Rajasthan at Bikaner (Raj.) under supervision of Ayurved physion. Author conducted and supervised this study as an observer as per modern medicine concept. It was observational scientific study. Author does not have any financial and personal interest.

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Conflict of Interest

None.

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