

fresh the overheated blood. Water is frequently repudiated by men and women, wholly unmindful that it has advantages for them beyond price. There are no known counterindications to water as a drink, and the quantity may be whatever the stomach and intestines are able to absorb. It is safe to say that pure water may be drunk at any time and with hardly any limitations save such as might appeal to anyone. In many cases, covering seventeen years of observation, drinking of water freely with meals, immediately before or after them, has not been attended with bad effects, nor does it justify the numerous precautions generally given against mixing water and food in the stomach. Rightly considered, drinking with meals ought to be a benefit. It holds the food in better solution till acted on by the juices, supplying fluid to the blood-stream, and, most important, forming a natural safeguard against gluttony. It is possible to keep well for a certain length of time without attention to physiology or dietetics, but it is a mistake which comes in for compound interest at the end. Moderately used, it is reasonably safe to indulge in coffee, tea and even alcoholics, but it is a hazard which a first-class life risk should avoid. Water is universally man's sweetest and safest drink, and rightly used would in itself largely help to extend his life well toward the century mark. Food tastes better and is more agreeably relished by the water drinker than by those who drink wine at table. Liquors confer no useful assistance in passing the dangers of life, and in self-interest it would be nearer to safety to let Nature's provision for drink have full credit, as being the best, and accept no tradesman's substitute. The best drink for man is pure water, and the ordinary drinking water of a country is always superior to any of the so-called health waters or bottle drinks.

10 W. Forty-ninth Street.

A SULPHOSALT OF THE ALIPHATIC CREOSOTE-ESTERS, AND ITS THERAPEUTIC USEFULNESS.*

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Early in May, 1898, Dr. G. Wendt, of Berlin, the manufacturer of a series of sulpho-acid salts of the aliphatic creosote-esters, through his American agents,¹ placed some of his products in my hands for therapeutic investigation. In responding to the kind invitation of your secretary, I grasped the opportunity to report at this meeting the therapeutic qualities of one of these salts.

Besides the lime salt, of which I shall presently speak, a salt of silver, argentum eosolicum, $C_6H_7OCH_3OC_2H_4OAg_3(SO_3)_3$, resp. $C_9, H_7, Ag_3, S_3, O_{12}$ and one of quinin, chininum eosolicum, $(C_6H_7S_3O_{12})(C_{20}H_{24}N_2O_2)_3$, were given to me in order to determine their therapeutic usefulness. Experimental work of another nature, however, prevented me from taking up the latter combinations on a larger scale.

The calcium salt was the one most experimented with by me. Three distinct therapeutic elements enter into its composition, viz., sulphur, creosote-ester and calcium.

Sulphur stimulates the mucosa of the alimentary tract and its administration is frequently followed by a slight increase of intestinal secretion and peristalsis. Besides its valuable antifermentative properties, it seems to exhibit an especial affinity for one or the other components of the tissue albumin. Thus, I think, it facilitates the resorption or the deposition of the creosote derivative into the glandular system.

The therapeutic value of creosote or its esters is too well known to be discussed here at length. Undoubtedly creosote is gradually split up into more simple bodies, in which forms it is carried to the different organs. The neutralizing and antiputrefactive powers of creosote are comparatively limited if tested in the laboratory; in the body, however, it exerts these qualities in a greater measure than the majority of the more energetic so-called antiseptics. This fact I attribute to its non-coagulating of albumin. Mercuric corrosive chlorid, carbolic acid, salicylic acid, alcohol, beta-naphthol-sulphonate, resorcin, zinc chlorid, zinc sulphate and other antiseptic agents are coagulants of albumin, and as such may become tissue destroyers. In consequence thereof great caution is exercised with most of these antiseptics when administered internally, and only small doses of them, in many instances insufficient for the purpose, are as a rule prescribed. Moreover, as is the case with corrosive sublimate for instance, Koch's "strongest antiseptic," the mercury coagulates and throws down the albumin occurring in the medium to be disinfected, combining to mercury albuminate, also possessing antiseptic qualities but which, by its formation, deprives the supernatant fluid almost totally of its contents of mercury. The internal administration, therefore, of mercuric chlorid, and the antiseptics belonging to its class, should be restricted to certain specific and well-defined pathologic conditions, and their employment as disinfectants or germicides, if not otherwise combined, should be abandoned altogether, both on account of their toxicity and their relative inefficiency in all those chronic affections, characterized by progressive systemic decline.

Calcium, finally, that is the form found in this salt, lessens the acid degree of the material contained in the alimentary organs, thereby preventing or allaying undue irritation and neutralizing certain substances of toxic tendencies.

The eosolate of calcium considered as a guaiacol derivative has this formula: $(C_9H_7S_3O_{12})_2 \cdot Ca_3$ and contains, therefore, in the neighborhood of 25 per cent. of creosote. It is a grayish powder, feeling to the touch like finely pulverized pumice-stone. Its odor is slightly pungent and somewhat ethereal, its taste a little acid and leathery. It is soluble in from eight to ten parts of cold, and in seven parts of hot water. It is very slightly soluble in alcohol, and insoluble in chloroform and turpentin, but is readily dissolved by hydrochloric and by citric, and by some other organic acids, while it dissolves only slowly in acetic acid.

In a dog, weighing 16 kilog., 3 gm. of the eosolate of calcium produced severe vomiting and catarrhal condition of the nasal and pharyngeal mucosa. In a dog weighing 7.5 kilog., 3 gm. of the salt brought on vomiting, intense purgation and marked emaciation. In the healthy human organism 0.33 seemed to exert but little influence; 0.6 has produced a fulness in the epigastric region, slight constipation and diaphoresis; 1 gm. has produced griping pains in the intestines, and the ingestion of 2 gm. was followed by a profuse diarrhea.

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¹ The Fischer Chemical Importing Co., New York City.

Eosolate of calcium, in doses less than 1 gm., does not impart the greenish tint to the urine which generally appears after the ingestion of phenols. When 2 gms were administered, a discoloration was noticeable in some instances.

I have clinically experimented with *calcium eosolicum* in a variety of disorders. I report the following cases:

DIABETES INSPIDUS.

CASE 1.—W. C., male, aged 16 years, an American with no occupation, was referred to me for treatment on May 22, 1898.

Anamnesis.—Healthy parentage. The patient met with a severe accident when 7 years old, from the effects of which he never fully recuperated. Hydruria or polyuria were present ever since, and the body development came to a standstill; he was under the care of a score of physicians.

Examination.—He to all appearances looked like a 9 or 10-year-old boy; height, 4 feet 8¼ inches, weight 35.5 kilog. Temperature, rectal, was 36.7 C. (98 F.). Pronounced emaciation and nervousness was evident. Physical examination of the heart and lungs revealed no disorder. The digestive organs and abdominal viscera were apparently normal. Mental acuteness was very keen, memory good, and there were no luetic symptoms.

Urine (voided in my presence).—570 c.c.; watery, odorless, sp. gr. 1002, very clear, acid (degree 0.03); solids, 1.5 gm.; carbamid, 0.571 gm.; chlorids, 0.285 gm.; phosphates, see degree of acidity; no albumin, no dextrose.

Treatment.—No dietetic restrictions were imposed, but a bath of 37.5 C. every other night; extract ergot fl., 3 gm., four times a day. On May 31 the patient was still more emaciated—weight 35 kilog.; rectal temperature 36.6 C. (97.8 F.). He had voided, since 8 p.m. of the previous day, the following amounts of urine:

No. of Micturition.	Time.	Amount.
1.....	May 30, 8 p.m.....	420 c.c.
2.....	May 30, 9:30 p.m.....	420 c.c.
3.....	During night.....	780 c.c.
4.....	During night.....	570 c.c.
5.....	May 30, 7:20 a.m.....	690 c.c.
6.....	May 30, 9:55 a.m.....	960 c.c.
7.....	May 30, 12 m.....	930 c.c.
8.....	May 30, 4 p.m.....	630 c.c.
9.....	May 30, 6 p.m.....	660 c.c.
10.....	May 30, 7:30 p.m.....	630 c.c.
		6690 c.c.

The specific gravity of the twenty-four hours' urine was 998.5.² I mention this fact in particular, as I have never before seen a specimen of urine lighter than water, and as I, in the literature of this subject, failed to notice any references to urines of a specific gravity less than 1000. I must add that the urine had cooled before the specific gravity was ascertained: Two hydrometers standardized at 25 C. were employed; both indicated the same degree. The urinoglucosometer devised by me, one of the scales of which descends to 990 degrees, pointed out a density somewhat higher, but still below 999 degrees. This instrument being standardized at 15.6 C., it was necessary to cool off the urine to that temperature. Pycnometric measurements were not made.

Treatment.—This was free ingestion of milk, to the total exclusion of all other nutrients and water; sitz baths slightly above body temperature; faradism, the ergot withdrawn and substituted by calcium eosolicum, 0.3 gm., three times daily.

The patient, as seen from the table, steadily gained in weight under this treatment. This was the more remarkable, as an increase in weight had not been noticed for years. At the same time the patient lost much of his nervousness and developed a healthy appearance. The hydruric condition improved gradually, that is in a relative sense. The quantity of the twenty-four-hours urine for the total period became remarkably diminished, though occasional increases were recorded, and the amount of solids excreted, as seen by the urinary density, was far in excess of that prior to the institution of this treatment.

² I deem it irrelevant for the present purpose to give all the dates of the various very minute and exactive urinary examinations. I shall attempt to report this case in full at some other time.

From June 1-2 to June 17, the following records were taken:

Date.	Time.	Quantity of urine voided in c.c.	Number of micturations.	Average amount of urine voided at each micturition.	Specific gravity of 24 hours' urine.	Quantity of milk ingested in c.c.	Body weight in kg.
June 1-2, 1898	From 7:30 P.M. to 6:50 P.M.	7,800	10	780	1002	8,000	35.25
June 2-3, 1898	From 6:50 P.M. to 8 P.M.	7,050	9	783.33	1006	7,500	
June 3-4, 1898	From 8 P.M. to 6:30 P.M.	6,600	11	600	1004	7,000	35.75
June 4-5, 1898	From 6:30 P.M. to 6 P.M.	6,720	10	672	1007	8,000	36
June 5-6, 1898	From 6 P.M. to 8 P.M.	8,160	14	582.86	1004	8,000	
June 6-7, 1898	From 8 P.M. to 8 P.M.	6,000	10	600	1008	8,000	
June 7-8, 1898	From 8 P.M. to 8 P.M.	6,600	10	660	1004	8,000	37
June 8-9, 1898	From 8 P.M. to 8 P.M.	5,400	10	540	1006	8,000	
June 9-10, 1898	From 8 P.M. to 8 P.M.	5,700	10	570	1006	8,000	37.5
June 10-11, 1898	From 8 P.M. to 8 P.M.	6,000	10	600	1005	8,000	
June 11-12, 1898	From 8 P.M. to 8 P.M.	4,800	9	533.33	1008	8,000	
June 12-13, 1898	From 8 P.M. to 8 P.M.	7,500	12	625	1007	8,000	38.5
June 13-14, 1898	From 8 P.M. to 8 P.M.	5,400	8	675	1005	7,000	
June 14-15, 1898	From 8 P.M. to 8 P.M.	5,250	11	477.27	1009	7,000	
June 15-16, 1898	From 8 P.M. to 8 P.M.	5,100	10	510	1008	7,000	
June 16-17, 1898	From 8 P.M. to 8 P.M.	4,500	9	500	1009	7,000	39.25

June 19: Weight, 39.75 kilog.; rectal temperature, 37.2 C. (99 F.), and improvement plainly noticeable. Treatment: Diet, 5 liters of milk per diem; calcium eosolicum, 0.3 gm. four times daily.

June 26: Weight, 40 kilog.; rectal temperature, 37.2 C. (99 F.), the hydruric symptoms still improving. Treatment: Diet, 4 liters of milk daily (the amount had to be lowered as the patient developed a dislike for it); calcium eosolicum, 0.5 gm. four times daily.

July 7: Weight, 40 kilog., hydruria diminished.

July 11: Weight, 40 kilog.; the amount of urine voided 4200 c.c. Treatment: Mixed food and water *ad lib.*, and calcium eosolicum continued.

July 20: Weight, 40.5 kilog.; rectal temperature, 37.1 C. (98.8 F.), with diuresis somewhat more pronounced.

July 23: Weight, 40 kilog.; rectal temperature, 37.2 C. (99 F.), diuresis declining. The patient felt very comfortable, with thirst diminished. Calcium eosolicum was advised to be continued and he was discharged, improving.³

CASE 2.—E. R., male, aged 47, married, American; first consulted me on May 19, 1897. He had felt depressed for some time, and complained of anorexia, constipation, great thirst, polyuria and deterioration of sexual power, and of an eczematous condition on the neck and extremities. His weight was 68.5 kilog.; temperature (axilla), 37.1 C. (98.8 F.), with hydruresis very pronounced. The urine was pale, limpid, sp. gr. 1002, neutral; no excess of phosphates, chlorids or sulphates; urea increased absolutely; neither albumin nor glucose.

Treatment.—No restriction of diet or water was imposed, but alcoholics were prohibited, and antipyrin, 0.35 gm. given three times daily, with local medication for eczema. The symptoms did not improve, and successively ergot, Fowler's solution, salol and strychnia were prescribed without effecting any change in the general condition.

On November 16 an absolute milk diet was ordered. Dip-sis decreased somewhat, as well as did diuresis. All medical agencies were dispensed with, excepting local applications. Toward the middle of January, 1898, the patient had to abandon the milk regimen and return to the unrestricted diet.

January 26: Weight 69.25 kilog., temperature normal. He was very irritable; thirst and diuresis slightly augmented.

The status of the patient, in general, remained unaltered, with no permanent improvement.

May 14: The milk regimen was resorted to again, and a fortnight later calcium eosolicum in 0.3 gm. doses four times daily was ordered to be taken.

June 12: Patient weighed 72 kilog. and felt very well. The eczema had disappeared; feeling of thirst and diuresis greatly improved—amount of twenty-four hours urine, 3800 c.c., while 5 liters of milk were taken.

The milk regimen was dispensed with after another week and the dose of calcium eosolicum increased to 0.75 gm. four times daily. A decided and progressive improvement followed the administration of this medicine, which, in this dose even, was well borne by the stomach; an occasional slight constipation was caused

³ The patient returned to his native village in a neighboring State. The last time he wrote to me he reported further improvement.

by the calcium salt, but readily yielded to mild evacuants. I found the patient, when last seen in August, 1898, in high spirits and he was reminded of his recent condition only by transitory attacks of dipsois and subsequent hydruria.

CASE 3.—B. I., female, aged 24, married, American, and mother of one child, suffered from polydipsia, hyperdiuresis, progressive emaciation and dysphoria for about six months, when she was referred to me for treatment on Sept. 26, 1898. Her weight was 55.5 kilog., her rectal temperature 37.2 C. (99 F.); bronchial irritation and cough were present, the lungs and abdominal organs apparently sound. The urine was pathognomonic of hydruria; excessive in quantity, of water-color, of low density and a faint acidity. The patient was put on an exclusive milk diet and on calcium eosolicum, 0.5 gm. four times daily. She reported improvement on September 30. The milk regimen was continued (5 liters for the twenty-four hours), and the dose of the medicine increased to 0.75 gm.

October 6: Her weight amounted to 56.5 kilog., and her rectal temperature was 37.3 C. (99.1 F.); polydipsia and diuresis were diminished.

The urine voided from October 12, 11 a.m., to October 13, 11 a.m., was 3150 c.c.; the milk ingested, 4500 c.c. Her weight, October 13, was 58 kilog.; rectal temperature 37.3 C. (99 F.). She continued to improve when seen last in November, 1898.

DIABETES MELLITUS.

I have tested calcium eosolicum in five diabetic patients. I shall not endeavor to relate the complete clinical history of these cases, but will refer briefly only to the periods during which the medicine was taken.

CASE 1.—Mrs. B., aged 65, English, had been affected with diabetes mellitus since her 58th year, the quantity of urinary glucose under a milk regimen and a moderate mixed diet fluctuating between 0.25 and 2.5 per cent. Absolute proteid nourishment was not permissible, on account of excess of acetone and the presence of ethylidiacetic acid in the urine.

May 27, 1898: The amount of glucose in the urine was 2.25 per cent. Treatment: Milk diet and calcium eosolicum, 0.3 gm. three times daily.

June 2: Traces of glucose; treatment continued.

June 16: Glucose absent; treatment continued.

June 25: Traces of glucose. Treatment: Moderate, mixed diet, calcium eosolicum, 0.4 gm. thrice daily.

July 6: Glucose present—0.25 per cent. Treatment: Diet continued; calcium eosolicum, 0.5 gm. thrice daily.

July 14: Traces of glucose; diet continued, with calcium eosolicum, 0.5 gm. four times a day.

July 28: Traces of glucose, strict proteid nutriment; calcium eosolicum as before.

August 2: No glucose; milk diet; calcium eosolicum dispensed with.

August 6: No glucose; moderate mixed diet; no medication. The patient, without further medication, continued fairly well, until the end of September, when she was taken with endocarditis to which she succumbed on October 3.

CASE 2.—Mrs. G., aged 47, German, had had the disease five years.

June 1, 1898: Under a diet largely albuminous, her weight was 72.5 kilog. The sp. gr. of the urine was 1026.5, glucose 2 per cent. Treatment: The same diet, of sufficient caloric value, was continued, and calcium eosolicum, 0.3 gm. three times daily.

June 6: Weight 73 kilog. The urine showed a sp. gr. of 1024, and glucose 1.75 per cent.

June 11: Weight 74 kilog., with sp. gr. of 1024, glucose 1.15 per cent.

June 19: Weight 74.75 kilog., urine's sp. gr. 1021.5, glucose 1 per cent. Treatment: Same diet continued; calcium eosolicum, 0.5 gm. three times a day.

August 12: Weight 76 kilog.; the urine showed a sp. gr. of 1017, and traces of glucose.

August 25: Weight 77.5 kilog.; sp. gr. of the urine 1019, and no glucose.

September 16: Weight 80.125 kilog.; sp. gr. of the urine 1019, with no glucose. The medicine was withdrawn.

CASE 3.—Mrs. W., aged 53, German, presented herself, but the duration of the disease was unknown.

July 22, 1898: Weight was 98 kilog. The diet was unrestricted, contrary to the advice of the family physician. The urine presented a sp. gr. of 1034, glucose 3.02 per cent. Treatment: Absolute proteid nourishment; hydrargyrum chloridum mite, 0.005 gm. every two hours.

July 24: Weight 97.5 kilog.; urine's sp. gr. 1028, glucose 2.1 per cent.

July 30: Weight 95.75 kilog.; sp. gr. of urine 1029.5, glucose 1.2 per cent. Treatment: Diet as above; calcium eosolicum, 0.4 gm. four times daily.

August 6: Weight 96.5 kilog.; sp. gr. of urine 1026, glucose 0.45 per cent.

August 13: Weight 96.5 kilog. The urine showed a sp. gr. of 1026, and traces of glucose. Treatment: Proteid diet, 100 gm. of carbohydrates allowed for the twenty-four hours, and the medicine continued.

September 16: Weight 96 kilog.; sp. gr. of urine 1023.5, and traces of glucose. The medicine was withdrawn.

CASE 4.—Mrs. S., aged 64, Hebrew, the duration of the disease three years, was in charge of her family physician.

Aug. 5, 1898: Urine, glucose 0.2 per cent, serum albumin in appreciable quantity, acetone present. Treatment: Dietary, milk; medicinally, calcium eosolicum, 0.3 gm. three times a day.

August 6: Urine showed no glucose, serum albumin in appreciable quantity, and traces of acetone.

August 8 and 9: Urine showed no glucose, nor serum albumin and no acetone. Diet and medicine were continued for some time afterward.

CASE 5.—Mrs. R., aged 47, Hebrew, apparently had alimentary diabetes of short duration.

Oct. 14, 1898: Urine presented a sp. gr. of 1019.5, glucose 0.5 per cent.

October 18: Urine's sp. gr. 1022, glucose 0.45 per cent. Treatment: Milk regimen; calcium eosolicum, 0.35 gm. three times a day.

October 20: Urine's sp. gr. 1021, glucose, 0.2 per cent.

November 1: Urine's sp. gr. 1022.5, with traces of glucose. Treatment discontinued.

CHRONIC ULCERATIVE PHTHISIS.

The action of calcium eosolicum in ten cases of this affection which were under my observation, during the course of the year, is recorded in the following:

CASE 1.—M. C. G., aged 26, female, single, American. The disease was first recognized 2½ years previously.

May 28, 1898: Patient having just returned from a sanatorium, weight 56 kilog., axillary temperature, 4 p.m., 38.1 C. (100.5 F.). The disease was unilateral; coughing and expectorating moderately; tubercle bacilli in the sputum; heart's action full and accelerated; complaints of drenching perspiration, of great weakness—patient hardly able to walk—but of little pain. Treatment: Overalimentation; calcium eosolicum, 0.5 gm. every three hours.

June 1: Weight 55.5 kilog., temperature (axilla), 6 p.m., 37.8 C. (100 F.); feels much stronger.

June 4: Weight 56.25 kilog., temperature (axilla), 4 p.m., 37.8 C. (100 F.); feels stronger. Treatment: Diet as above; fresh air; sun baths; calcium eosolicum, 0.6 gm. every three hours.

June 12: Weight 57.5 kilog., temperature (axilla), 3:30 p.m., 37.2 C. (99 F.).

June 18: Weight 58 kilog., temperature (axilla), 4 p.m., 37.2 C. (99 F.); feels comfortable. Treatment: Diet, etc., as above; calcium eosolicum, 0.7 gm. every three hours.

June 25: Weight 58.25 kilog., temperature (axilla) 37.2 C. (99 F.); no cough; little perspiration; tubercle bacilli in the sputum.

The patient insisted on going home (Maryland); discharged—improving. When heard from last, improvement persisted. The large doses of this salt of eosol, averaging for the last week 4.2 gm. daily, were very well borne by the patient.

CASE 2.—M. M. D., aged 24, a female, married, Irish. The disease was first recognized six months previously.

May 30, 1898: Weight 54 kilog., temperature (axilla), 3 p.m., 38.9 C. (102 F.); adhesions of pleura; constant pain beneath left scapula; dulness in left clavicle region; cavities at the apex; cough loose, expectoration, grayish-purulent; tubercle bacilli in sputum; nocturnal perspiration. Treatment: Overalimentation (milk and fats); fresh air.

R. Calcii eosolici.....	715
Aquæ font.....	50
Extracti hyoscyami fluidi.....	2
Syr. pruni virginianæ.....	60
Glycerini q. s. ad.....	150

M. Sig. A teaspoonful every three hours.

June 8: Weight 55.5 kilog., temperature (axilla), 3 p.m., 38.3 C. (101 F.).

June 13: Weight 56 kilog., temperature (axilla), 3 p.m., 38.3 C. (101 F.)

June 20: Weight 57 kilog., temperature (axilla), 2:30 p.m., 37.8 C. (100 F.)

June 28: Weight 57.75 kilog., temperature (axilla), 3 p.m., 37.2 C. (99 F.). Treatment: Mixed diet, milk in abundance; mist. calcii eosol. as above. Teaspoonful three times daily.

July 22: Weight 60.5 kilog., temperature (axilla), 4 p.m., 37.2 C. (99 F.). Treatment: Mixed diet, milk in abundance; as above; teaspoonful twice daily.

September 16: Weight 64 kilog., temperature (axilla), 3:30 p.m., 37.2 C. (99 F.). Treatment as above; to continue medicine twice daily for two months.

March 8, 1899: Weight 66.5 kilog.; temperature (axilla) 6 p.m., 37.2 C. (99 F.); no pain; very little cough and expectoration; no tubercle bacilli in sputum; no nocturnal perspiration.

CASE 3.—M. T. B., aged 37, male, German, the disease was first recognized in December, 1897.

June 5, 1898: Weight 81 kilog., rectal temperature 38.5 C. (101.3 F.); disease fully developed; tubercle bacilli in sputum; pallor exilmius; marked adynamia. Treatment: Forced feeding; 6 liters of milk per day; sun baths; lung gymnastics; calcium eosolicum, 0.3 gm. tablets, 3 per day.

June 19: Weight 80 kilog., rectal temperature 38.3 C. (101 F.). Treatment: As above; calcium eosolicum, 0.3 gm. tablets, five per day.

July 1: Weight 81.5 kilog., rectal temperature 37.1 C. (98.8 F.)

July 14: Weight 83 kilog., rectal temperature 37.7 C. (99.9 F.)

September 6: Weight 85.75 kilog., rectal temperature 37.2 C. (99 F.); patient discontinued treatment.

December 27: Attack of la grippe; rectal temperature 40 C. (104 F.); acute affection lasting three weeks.

Feb. 3, 1899: Weight 79 kilog., rectal temperature 37.5 C. (99.5 F.) Treatment: As above.

R. Heroin	0	15
Calcii eosolici.....	8	
Aquæ	50	
Syr. tolutani		
Glycerini, āā.....	60	

M. Sig. A teaspoonful every three hours.

February 7: Weight 79.25 kilog., dyspeptic symptoms. Treatment: Diet as above; mixture discontinued, instead of it:

R. Calcii eosolici		
Natrii bicarbonici, āā.....	0	3
Carbo animalis purificatus.....	0	75

Ft. pulv. d. tal. dos. triginta. Sig. One powder four times daily.

February 14: Weight 81 kilog., temperature (axilla), 37.1 C. (98.8 F.); dyspeptic symptoms subsiding.

February 22: Weight 82.5 kilog., temperature (axilla), 37 C. (98.6 F.)

March 1: Weight 84.25 kilog., temperature normal.

March 10: Weight 85 kilog., temperature normal.

May 4: Weight 88.5 kilog., temperature normal; medication discontinued.

Calcium eosolicum, plain, tended to purge the patient. Together with syrup and glycerin, in the form of a cough mixture, indigestion followed its administration; combined with bicarbonate of soda and animal charcoal, it caused no unpleasant effects.

CASE 4.—T. T., aged 34, male, American, with duration of disease unknown, probably nine months.

June 5: Weight 77 kilog., temperature (axilla), 6 p.m., 37.8 C. (100 F.); physical signs of local disease very pronounced; hectic condition; asthenia, cough and expectoration loose; no tubercle bacilli in sputum. Treatment: Absolute milk regimen, starting with 4 liters a day; to spend twelve hours in bed, and the rest of the day in the open air; calcium eosolicum, 0.3 gm. four times daily.

June 17: Weight 78.75 kilog., temperature (axilla), 6 p.m., 37.2 C. (99 F.) Treatment: Diet, 5 liters of milk daily; calcium eosolicum, 0.3 gm. three times daily.

July 3: Weight 81 kilog., temperature (axilla), 11 a.m., normal. Treatment: Diet, 6 liters of milk daily; medicine as above.

July 25: Weight 84.5 kilog., temperature normal; asthenia and hectic condition greatly improved; very little cough and expectoration; discharged; improved.

The daily dose of calcium eosolicum had to be somewhat reduced in the course of treatment on account of the loose bowels of the patient.

CASE 5.—S. K., aged 32, female, American, presented, the duration of the disease five months.

June 11, 1898: Weight 61.5 kilog., temperature (axilla), 37.9 C. (100.3 F.); apical disease very marked; cavity formation on both sides; cough aggravated; expectoration profuse and purulent; great debility; nocturnal perspiration profuse and extremely exhausting; bacillus tuberculosis in sputum. Treatment: Overalimentation; salad oil, full cream pancreatin; calcium eosolicum, 0.3 gm. every three hours.

June 16: Weight 60.75 kilog., temperature (axilla), 38.3 C. (101 F.)

June 23: Weight 60 kilog., temperature (axilla), 37.5 C. (99.5 F.)

June 29: Weight 60 kilog., temperature 37.8 C. (100 F.) Calcium eosolicum had to be withdrawn as the patient seemed to be idiosyncratic against it.

CASE 6.—M. F., aged 44, male, Austrian; the duration of the disease 2½ years, presented himself.

July 6, 1898: Weight 54 kilog., rectal temperature, 11:30 a.m., 38.5 C. (101.3 F.); disease far progressed; pulse very weak and frequent; edema of feet; dyspnea; pronounced hectic condition; asthenia; bacillus tuberculosis in sputum. Treatment: Mixed diet; olive-oil subcutaneously. strychnia internally; calcium eosolicum, 0.3 gm. three times a day.

July 7: Weight 54 kilog., rectal temperature, 4 p.m., 38.9 C. (102 F.)

July 8: Weight 54 kilog., rectal temperature 38.3 C. (101 F.)

July 10: Weight 53.75 kilog., rectal temperature 37.7 C. (99.9 F.); treatment discontinued; patient insisted on going to Colorado at once.

CASE 7.—D. T., aged 59, male, German; the duration of the disease as three years.

August 14, 1898: Weight 52.5 kilog., rectal temperature 37.8 C. (100 F.); repeated attacks of hemoptysis from excavation; cough loose; expectoration profuse; diarrhea; pronounced adynamia; tubercle bacilli in sputum. Treatment: Overalimentation; hypodermic injections of strychnia; calcium eosolicum, 0.3 gm. three times a day.

August 21: Weight 53 kilog., rectal temperature 37.7 C. (99.9 F.) Treatment: As above; calcium eosolicum, 0.4 gm. thrice daily, combined with sodium bicarbonate and charcoal.

August 28: Weight 54 kilog., rectal temperature 37.8 C. (100 F.)

September 4: Weight 54 kilog., rectal temperature 37.7 C. (99.9 F.)

September 6: Weight 53.5 kilog., rectal temperature 37.2 C. (99 F.) Treatment: As above; calcium eosolicum, 0.3 gm. twice daily.

September 8: The medicine was discontinued as the diarrhea seemed to increase under its administration, greatly weakening the patient.

CASE 8.—M. J. G., aged 33 female, married, American. The duration of the disease was 1½ years.

December 23, 1898: All symptoms characteristic of the disease were present, including tubercle bacilli; both lungs affected; temperature (axilla) 39.2 C. (102.5 F.) Treatment: Milk regimen; calcium eosolicum, 0.3 gm. three times a day with sodium bicarbonate.

December 28: Temperature (axilla), 37.5 C. (99.5 F.)

December 30: Temperature (axilla) 37.7 C. (99.9 F.)

Jan. 5, 1899: Temperature (axilla) 37 C. (98.6 F.)

January 16: Weight 55.5 kilog., temperature (axilla) 37.2 C.

R. Calcii eosolici.....	5	
Aquæ	35	
Ext. lobeliae-infl. fl.....	0	5
Aquæ anisi, q. s., ad.....	100	

M. Sig. A teaspoonful every three hours.

January 27: Weight 56.25 kilog., temperature (axilla) 37.1 C. (98.8 F.)

March 1: Weight 59 kilog., temperature (axilla) 37.2 C. (99 F.)

CASE 9.—F. U., aged 31, female, married, American; duration of disease 10 months.

Jan. 10, 1899: Disease well pronounced; thickening of pleura; cough very persistent; expectoration scanty; tubercle bacilli in sputum; temperature (axilla) 38.3 C. (101 F.); urine contains serum albumin, but no casts. Treatment: Milk diet.

R. Calcii eosolici.....	10	
Aquæ	70	
Natrii benzoici.....	20	
Syr. tolutani		
Aquæ camphoræ, āā.....	75	

M. Sig. A teaspoonful every two hours.

January 11: Cough looser; temperature (axilla) 37.5 C. (99.5 F.)

January 12: Cough looser; expectoration increased; temperature (axilla) 37.6 C. (99.7 F.)

January 15: Cough and expectoration loose; temperature (axilla) 37.3 C. (99.1 F.)

January 20: General condition much improved.

February 4: Weight 65.75 kilog., temperature (axilla) normal. Treatment: Overalimentation with milk; calcium eosolicum, 0.3 gm. four times daily.

February 7: Weight 66.25 kilog., temperature normal.

February 11: Weight 67 kilog., temperature normal.

February 24: Weight 69.25 kilog., temperature normal.

March 3: Weight 70.5 kilog., temperature normal; symptoms in general relieved; patient feels very comfortable. Treatment: As above; calcium eosolicum, 0.3 gm. twice daily.

May 6: Weight 76 kilog., temperature normal; shallow and labored breathing; bronchial rales, somewhat crackling; very little cough and expectoration; no tubercle bacilli.

CASE 10.—M. N. M., aged 41, male, German. The disease was first recognized about two years previously.

Jan. 21, 1899: Weight 60 kilog., temperature (axilla) normal; pain over scapulæ; dyspeptic symptoms; infiltration of apices; cough persistent; expectoration mucopurulent, occasionally containing minute particles of blood; tubercle bacilli in sputum; drenching night sweats; emaciation; asthenia. Treatment: Milk diet, 200 c. c. every 1½ hours; to facilitate digestion, sodium bicarbonate, nux vomica and hydrastis combined; calcium eosolicum, 0.3 gm. in capsules four times daily.

January 25: Weight 60.75 kilog., temperature normal.

January 31: Weight 62 kilog., temperature normal; patient removed to Baltimore, whence he reported improvement in March.

NEPHRITIS.

My observations as to the therapeutic usefulness of calcium eosolicum in the various forms of nephritis are very limited. Only of late have I started to employ this sulphocreasote salt in renal affections. As my cases are not long enough under the influence of this drug, I am not enabled to give any definite data at this early date.

A study of the clinical reports tends to demonstrate at once that this sulphocreasote derivative can be administered for long periods without effecting gastric or intestinal disturbances. It was well borne in nearly every instance, even in well-advanced cases, and also where dyspeptic and other symptoms of alimentary difficulty prevailed.

The medicinal action of calcium eosolicum seems to depend on the first instance in its neutralizing qualities, which others may be tempted to call "antiseptic" or "germicidal." I doubt, however, the propriety of classifying calcium eosolicum as a germicide in the strict sense of the meaning; it does not destroy germs or micro-organisms, but it apparently effects a condition of the system, especially of the fluids, which is averse to bacterial growth. If it is potent in the destruction of the already formed toxic products of bacterial life, I can not say, but I maintain that the eosolate of calcium besides its apparent neutralizing power just mentioned, is a positive and harmless neutralizer of a number of toxic substances of non-bacterial origin.

All the other medicinal qualities of calcium eosolicum seem to depend more or less on its action as a neutralizer and are therefore secondary to the latter. Its antipyretic, analgesic, emollient, stimulating, tonic and restorative properties—sufficiently demonstrated by this report—seem to be nothing else but mere enunciations of its neutralizing force.

Vaginal Irrigation for Leucorrhea.

- R. Potassii chloratis.....12 parts
Vini opii.....10 parts
Aquæ picis.....300 parts
M. Sig. Add 3ii-iii to a quart of warm water.—*Lutaud.*

CREMATION.*

BY ROBERT MARSENA STONE, A.M., M.D.

OMAHA, NEB.

A study of the customs of civilized nations of this and many past generations shows that we have blindly accepted one custom and followed it for indefinite years, without much question. It is that of the disposition of our dead. Long-accepted custom has decreed that earth-burial is proper, and we have accepted it. Once in a great while we experience a rude shock as we learn of an event that took place in Cuba during the late war—the necessary saturation of the bodies of the victims of yellow fever with oil, and their burning on vast pyres because the sanitation of a city demanded it—but we lapse into reacceptance of the old custom and continue to think earth-burial the only procedure for ordinary death. Few men care to think and reason about such matters until forced by the presence of grim death, and then grief holds sway and the time for dispassionate thought has passed.

This particular study and address is due to a discussion of the general question of the disposition of the dead apart from any personal interest. It arises from a query presented: "Is it best that we bury our dead?" "Is there good reason for a custom so long established, so well settled, so thoroughly accepted by the civilized world?" Is there any good reason why some other method of disposition should be adopted?" And still another question is put, and to the physician this is the hardest of all: "Do the living suffer harm by reason of the almost universal custom of earth-burial?" Still another: "Are these few of whom we occasionally hear, who cremate their dead, fanatics, who without good reason have adopted that method, or are they wiser than the masses, have a deeper love for their fellows, an unwillingness to see them harmed, and have they as tender affections and sentiments as the rest of humanity?"

One of the noblest sentiments, the possession of which is characteristic of the civilized nations of the world, is that of a reverence for the dead which impels us to honor them after death, to erect monuments to perpetuate their memory, to beautify the places of interment, the cemeteries, and to regard as holy and sacred the particular spot selected for the last resting-place of one's own dead, to be kept beautiful by constant care and by adornment by flowers. This sentiment is most deeply rooted in the innermost recesses of the hearts of the best people of all cultured lands. The custom of acting on this sentiment can never be changed until we learn that the presence of the urns containing the ashes of our most loved ones renders the chamber in which they are placed, in our own houses, or the columbaria in a cemetery, equally sacred places for communion, for reflection on the virtues of the dead, places to be beautified with flowers as the graves now are and having the advantage over them, especially when they are in one's own home, of constant access, regardless of weather or ill health.

I am firmly convinced that this substitution of sentiment, from the grave to the urn, this recognition that the urn with its ashes renders its home sacred, will sooner or later be accepted and will result in the transfer of our holy regard from the grave to the urn, also, beautified with constantly changed flowers, and result in the adoption of cremation by thinking, cultured people of all communities.

*Presented to the Section on State Medicine, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.