SARCOMA OF THE LONG BONES. MASSACHUSETTS GENERAL HOSPITAL CASES.

CASE.	AGE.	OPERATING SURGEON.	SEX.	REGION.	KNOWN DURATION OF GROWTH.	PATHOLOGICAL REPORT.	OPERATION DONE.	IMMEDIATE RESULT.	REMOTE RESULT.
1 R. B.	59	S. J. Mixer	F.	Humerus, upper third	4 mos.	Myelogenous round-celled sarcoma	Amp't at shoulder joint	Recovery	3 yrs. 4 mos., rheumatism, otherwise fair health.
2 L. T.	16	W. M. Conant	F.	Tibia	2 mos.	Giant-celled sarcoma	Resection	Recovery	3 yrs. 2 mos., good health, no recurrence.
3 M. C.	24	R. B. Greenough	F.	Ulna, lower end	3 mos.	Giant-celled sarcoma	Resection	Recovery	3 yrs. 2 mos., no recurrence.
4 R. O.	24	S. J. Mixer	M.	Tibia	13 mos.	Giant-celled sarcoma	Amp't thigh	Recovery	6 yrs. 3 mos., good health.
5 C. D. S.	33	C. B. Porter	M.	Radius Forearm	1 mos.	Giant-celled sarcoma	Partial operation, amp't above elbow	Recovery	15 yrs., perfect health.
6 J. C.	19	J. C. Warren	M.	Femur, lower end	3 mos.	Round-celled sarcoma	Amp't at the hip joint	Recovery	Died about 13 mos. Lung metastases.
7 R. L. T.	15	John Homans	M.	Tibia	3 mos.	Round-celled sarcoma	Amp't thigh	Recovery	2 yrs. 5 mos., good health. Drowned.
8 J. D.	33	F. B. Harrington	M.	Tibia	36 mos.	Spindle-celled sarcoma	Amp't thigh	Recovery	1 yr. 3 mos., died, metastases.
9 K. M.	26	A. T. Cabot	F.	Tibia	6 mos.	Round-celled sarcoma	Amp't thigh	Recovery	3 yrs. 6 mos., good health.
10 M. B.	50	J. W. Elliot	M.	Tibia	18 mos.	Osteoid sarcoma	Partial operation	Recovery	After 5 yrs. 3 mos., health poor; local trouble at operation site.
11 L. S.	16	J. C. Warren	M.	Middle Humerus	12 mos.	Large, round celled sarcoma	Amp't at shoulder joint	Recovery	No reply.
12 J. I. C.	33	H. H. A. Beach	M.	Humerus	3 mos.	Sarcoma	Amp't at shoulder joint	Recovery	Recurrence axillary in 10 mos.
13 C. O.	38	F. B. Harrington	F.	Humerus, upper third	16 mos.	Fibro-sarcoma	Amp't at shoulder joint	Recovery	2 yrs. 4 mos., died, metastases in lungs.
14 A. L.	15	C. B. Porter	M.	Humerus, upper third	24 mos.	Round-celled sarcoma	Amp't at shoulder joint	Died	Autopsy; metastases in lungs.
15 T. A. P.	67	J. W. Elliot	F.	Forearm	6 mos.	Osteo-sarcoma	Amp't upper arm amp't shoulder joint	Recovery	4 yrs. after last operation died of acute pneumonia.

DISINFECTION OF THE CLINICAL THERMOMETER.

BY FRANCIS P. DENNY, M.D., BROOKLINE, MASS.

In a letter to the *Philadelphia Medical Journal*, Dec. 15, 1903, Dr. W. H. Dyer called attention to a method of disinfecting the clinical thermometer by putting a few drops of formalin in the thermometer case. As this convenient method has not received the recognition that it deserves it has seemed well to again call attention to it, and report the results of some tests of its efficiency.

If two or three drops of formalin (40% solution of formaldehyde) are put in the thermometer case, they are taken up by the absorbent cotton usually kept at the end of the case, which will remain moist for a number of days. Formaldehyde gas is freely given off from the formalin, but is confined in the air-tight chamber of the case. If the formalin has been freshly added the surface of the thermometer when taken out of the case is often covered with minute sweat-like drops of fluid, showing the high humidity. The small size of the chamber, the high humidity, and the high temperature if the thermometer is carried in the vest pocket, furnish conditions very favorable for the disinfectant action of formaldehyde.

The tests which are here reported show that the disinfectant action of the formalin remains active for several weeks or as long as the pungent, irritating odor of the gas is marked. In practice it is well to add the formalin about every two weeks or oftener if the odor seems at all weak, and the cap should be kept on the case when the thermometer is being used in order to pre-

vent evaporation. The thermometer should be washed in water both before and after using. If by mistake the thermometer is put directly into the patient's mouth, the taste is somewhat unpleasant but no serious effects result.

Where the thermometer has been used for a patient known to have a contagious disease it is best to disinfect it outside the case, or at least fresh formalin should be added and the thermometer exposed to the gas a longer time than usual (several hours) before being used again. This method should not be employed when it is desired to use the same thermometer within a few minutes for another patient; for example, in hospitals and dispensaries, or when a physician is attending two patients in the same family. Under such circumstances disinfectant solutions should be used.

Tests. — The organisms used and the number of tests made with each were as follows: *Staphylococcus pyogenes aureus* 4, *P. typhosus* 3, *B. subtilis* (spores) 3, *B. diphtheriæ* (pure) 4, mixed cultures from throats of diphtheria patients 8; and in 3 tests the thermometer was infected by putting it for a moment in the mouth of a healthy person.

When cultures were used a few drops of an emulsion of the growth were put on a sterile glass slide and a clinical thermometer, or a glass rod of similar size, was rubbed in this. When partially dried the thermometer was put into the case with the infected end uppermost — that is, away from the moist cotton — so that the disinfection would have to be gaseous rather than from the direct action of the solution. For a control a second thermometer was similarly infected and

put in a case in which there was no formalin. Both cases were then put in the vest pocket. The exposure to the gas varied from five to twenty minutes; in most cases it was between ten and fifteen minutes. On being removed from the case the thermometer was emersed in a tube of bouillon and rinsed, in order to remove any traces of the disinfectant that might have been carried over from the case. The thermometer was next rubbed over the surface of a serum or agar tube, and then dropped into a fresh bouillon tube. The control thermometers were similarly treated, and all the tubes were then incubated.

All the controls showed growth. Of the exposed thermometers three showed growth, these having all been exposed in cases in which the formalin had been added several weeks before, and where the odor of the gas was very faint. That the absence of growth in the other cultures was not due to the presence of a small amount of the disinfectant which had been carried over from the thermometer case, was shown by the fact that there was growth in them when the same cultures were inoculated from the controls.

The following table shows in detail the tests which were made and the results obtained:

Test No.	Bacteria used in Test.	Minutes Exposed.	Result.	Remarks Formalin in the Thermometer case.
1	B. Diphtheria (pure)	17	—	3 weeks
2	" "	15	—	3 "
3	" "	15	—	3½ "
4	" "	12	—	Faint odor
5	" (mixed)	10	—	10 days
6	" "	10	—	2 weeks
7	" "	10	—	2 "
8	" "	15	—	4 "
9	" "	12	—	4½ "
10	" "	12	—	Fresh
11	" "	10	—	Faint odor
12	" "	5	—	Fresh
13	Staph. py. aureus	15	—	2 weeks
14	" "	15	—	2 "
15	" "	10	—	Fresh
16	" "	10	—	2 weeks
17	B. Typhosus	15	—	4½ "
18	" "	15	—	Fresh
19	" "	10	—	1 week
20	B. Subtilis (spores)	10	—	Fresh
21	" "	12	—	?
22	" "	15	—	Faint odor
23	Secretions of mouth	20	—	2 weeks
24	" "	15	—	2 "
25	" "	15	—	2 "

The convenience as well as the efficiency of this method should secure it more general use by medical practitioners. The time consumed in mixing disinfectant solutions is so great and their action so slow, that most physicians merely rinse their thermometers in water except when they have used them for a contagious case. The fact that contagious diseases cannot be diagnosed in their earliest stages, and also that apparently healthy persons may harbor in their mouths the organisms of diphtheria, influenza,

pneumonia, tuberculosis, and probably also of syphilis and other transmissible diseases, shows the importance of disinfecting each time after use.

By this method the thermometer is always disinfected after it is used with no loss of time to the physician except the time it takes once in two weeks to add three drops of formalin to the case.

Clinical Department.

A SECOND CASE OF PUERPERAL ECLAMPSIA SUCCESSFULLY TREATED BY RENAL DECAPSULATION.¹

BY GEORGE M. EDEBOHLS, M.D., NEW YORK.

A YEAR ago I had the honor of presenting for your consideration a report of the first case of renal decapsulation for puerperal eclampsia. The account of this first case, as published in the *New York Medical Journal* of June 6, 1903, may be epitomized as follows: Primipara, aged twenty-three. Typhoid fever during the fourth month of pregnancy. Symptoms of nephritis first noted during the seventh month. Uremia and eclamptic seizures near the end of eighth month. Five severe convulsions within sixteen hours, followed by forced delivery during fifth convulsion. Freedom from convulsions for forty-six hours after delivery. Then return of convulsions, six severe convulsions, not counting minor manifestations, occurring in eighteen hours. Decapsulation of both kidneys. No further convulsions, and rapid restoration of complete health.

I may add that I have seen the patient within the present month (May, 1904), and that she enjoys perfect health, with urine free from albumin and casts, fifteen months after operation.

In presenting the case I concluded with the following remarks: "The practical deduction from the happy result obtained is that we possess in renal decapsulation an additional potent resource in the treatment of puerperal eclampsia of renal origin." Personally, I should not hesitate to apply it again in a similar instance. I would even go further and propose a trial of renal decapsulation in puerperal convulsions of nephritic origin occurring prior to the beginning of labor. The mother would certainly be benefited, and the occurrence of premature delivery or the necessity of inducing it might possibly be averted.

On the first day of the present year the opportunity presented and was embraced of performing renal decapsulation for puerperal eclampsia upon the undelivered woman. The result is recorded in the following history of the case:

On Jan. 1, 1904, I was asked by Dr. N. R. Dann to aid him in a case of puerperal convulsions. The patient, W. N., a primipara of twenty, was married on Feb. 2, 1903, menstruated last on April 4, 1903, and expected to be confined on Jan. 9, 1904. Preg-

¹ Read before the American Gynecological Society, Boston, May 24, 1904.