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Staff Meeting Bulletin
Hospitals of the » » »
University of Minnesota

Ringworm of the Scalp

STAFF MEETING BULLETIN
HOSPITALS OF THE . . .
UNIVERSITY OF MINNESOTA

Volume XVII

Friday, March 8, 1946

Number 16

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Published for the General Staff Meeting each week
during the school year, October to June.

Financed by the Citizens Aid Society,
Alumni and Friends.

William A. O'Brien, M.D.

I. UNIVERSITY OF MINNESOTA MEDICAL SCHOOL
CALENDAR OF EVENTS
 Mar. 9 - Mar. 15, 1946
 Medical Visitors Welcome

No. 104

Saturday, Mar. 9

- 9:00 - 9:50 Pediatrics Grand Rounds; I. McQuarrie and Staff; W-205 U. H.
- 9:00 - 10:00 Surgery-Roentgenology Conference; O. H. Wangensteen, L. G. Rigler, and Staff; Todd Amphitheater, U. H.
- 9:00 - 9:50 Medicine Case Presentation; C. J. Watson and Staff; M-515 U. H.
- 10:00 - 11:50 Medicine Ward Rounds; C. J. Watson and Staff; E-221, U. H.
- 11:30 - 12:20 Anatomy Seminar; The Spleen of the Rat in Milk Anemia; Dr. Christopher J. Harric; I.A. 226.

Sunday, Mar. 10

- 11:00 - 1:50 Obstetrics and Gynecology Grand Rounds; J. L. McKelvey and Staff; Station 44, U. H.

Monday, Mar. 11

- 9:00 - 9:50 Roentgenology-Medicine Conference; L. G. Rigler, C. J. Watson and Staff; Todd Amphitheater, U. H.
- 9:00 - 10:50 Obstetrics and Gynecology Conference; J. L. McKelvey and Staff; Interns Quarters, U. H.
- 12:15 - 1:15 Pediatrics Seminar; Irvine McQuarrie and Staff; 6th Floor Eustis.
- 12:15 - 1:15 Obstetrics and Gynecology Journal Club; M-435, U. H.
- 12:30 - 1:20 Pathology Seminar; Toxoplasmosis; Dr. Douglas T. Lindsay; 104 I. A.
- 4:00 - School of Public Health Seminar; A Medical Entomologist in the Army; Mr. Theodore A. Olsen; 6th Floor Student Health Service Bldg., Women's Lounge.
- 8:00 - Clinical Research Club; Eustis Amphitheater; Speakers: Dr. Ivan Baronofsky, Dr. John Gillan, Dr. Gerald Needham.

Tuesday, Mar. 12

- 9:00 - 9:50 Roentgenology-Pediatrics Conference; Harry Mixer, Oscar Lipschultz; Eustis Amphitheater, U. H.
- 12:30 - 1:20 Pathology Conference; Autopsies; Pathology Staff; 102 I. A.
- 3:15 - 4:15 Gynecology Chart Conference; J. L. McKelvey and Staff; Station 54, U. H.

4:00 - 4:50 Surgery-Physiology Conference; Influence of Intestinal Hormones on Gastric Secretion; Dr. Varco and Dr. Culmer; Eustis Amphitheater.

Wednesday, Mar. 13

- 8:00 - 8:50 Surgery Journal Club; O. H. Wangensteen and Staff; M-515 U. H.
- 9:00 - 10:30 Pediatrics Staff Rounds; W-205 U. H.
- 9:00 - 10:50 Neuropsychiatry Seminar; Staff; Station 60 Lounge, U. H.
- 11:00 - 11:50 Pathology-Medicine-Surgery Conference; Secondary Thrombocytopenia; E. T. Bell, C. J. Watson, O. H. Wangensteen and Staff; Todd Amphitheater, U. H.
- 12:30 - 1:20 Physiology Chemistry Journal Club; Staff; 116 M. H.
- 4:00 - 6:00 Medicine and Pediatrics Infectious Disease Rounds; W-205 U. H.

Thursday, Mar. 14

- 9:00 - 9:50 Medicine Case Presentation; C. J. Watson and Staff; Todd Amphitheater, U. H.
- 12:30 - 1:20 Physiological Chemistry; Cyrus P. Barnun; 116 M. H.
- 4:30 - 5:20 Ophthalmology Ward Rounds; Erling Hansen and Staff; E-534, U. H.
- 4:30 - Bacteriology Seminar; Experimental Therapy of Tsutsugarushi Disease; W. F. McLimans; 214 M. H.
- 5:00 - 5:50 Roentgenology Seminar; Congenital Heart Disease; Dr. M. J. Shapiro; M-515 U. H.

Friday, Mar. 15

- 9:00 - 9:50 Medicine Grand Rounds; C. J. Watson and Staff; Todd Amphitheater, U. H.
- 10:00 - 11:50 Medicine Ward Rounds; C. J. Watson and Staff; E-221 U. H.
- 10:30 - 12:20 Otolaryngology Case Studies; L. R. Boies and Staff; Out-Patient Otolaryngology Department; U. H.
- 11:50 - 1:15 University of Minnesota Hospitals General Staff Meeting; Treatment of Hodgkins' Disease; Dr. T. B. Merner; New Powell Hall Addition Amphitheater.
- 1:00 - 2:00 Dermatologic Allergy; Dr. Stepan Epstein; W-312 U. H.
- 2:00 - 3:20 Dermatology and Syphilology; Presentation of Selected Cases of the Week; H. E. Michelson and Staff; W-312 U. H.
- 1:30 - 2:20 Roentgenology-Neurosurgery Conference; H. O. Peterson, W. T. Peyton, and Staff; Todd Amphitheater, U. H.

II. RINGWORM OF THE SCALP

Richard J. Steves

Ringworm of the scalp was described by the early 19th century dermatologists. In 1822 Wilkinson¹ recorded an epidemic which occurred in England. Since then cases have been observed in most sections of the world but the greatest incidence of the disease has been in France and England.

In 1843, David Gruby² delivered a paper before the Academy of Science in Paris, in which he described the causative agent of epidemic ringworm, which he named *Microsporum Audouini*. This same observer also described a large spored type of fungus which he found in other cases of tinea capitis. His work went either unnoticed or disbelieved and it was not until 1910 that Sabouraud³ "rediscovered" the organisms of Gruby and succeeded in growing them on artificial media. The discoveries of Sabouraud placed mycology on a scientific basis and thereafter tinea capitis was known to be due to either the *Microsporum* or the *Trichophyton* group of fungi.

Diagnosis

Clinical inspection may lead to a tentative diagnosis of tinea capitis and in some instances the specie of fungus may be suspected. Both the *Microsporum* and the *Trichophyton* groups have species which are pathogenic principally for certain of the lower animals (zoophilic). When humans are infected with zoophilic fungi there usually results an inflammatory, self limited disease. The infection is not contagious among humans and it subsides either spontaneously or with the aid of topical applications. Kerion is an example of infection with a zoophilic fungus (*T. gypseum*) and the disease is usually contracted from calves. The zoophilic representative of the *Microsporum* group (*M. lanosum*) is contracted from kittens and puppies. In humans this infection is usually less inflammatory than kerion and it is usually impossible to differentiate it clinically from the epidemic form.

Microsporum and *Trichophyton* each have species which are pathogenic only for humans (anthropophilic). These fungi produce non-inflammatory lesions, will not induce infections in animals and are very refractory to therapy. It is the *Microsporum* member of this group (*Audouini*) which produces epidemic ringworm of the scalp.

Microscopic examination of a hair, over which is placed a drop of sodium hydroxide, will establish the mycotic nature of the disease if spores are found. It is impossible to determine either the genus or the specie by this method. If spores are found to be arranged in a sheath surrounding the hair, the fungus is termed ectothrix (*M. lanosum*, *M. Audouini*, *T. gypseum*). If the spores invade the shaft of the hair, the fungus is termed endothrix (*Trichophyton*, of human origin). Infections caused by endothrix fungi are uncommon in this country although 3 cases are included in the present series.

Wood's light was first used in the diagnosis of tinea capitis by Margarot and Deveze in 1926. The following year Roxburgh⁴ reported its use in England. Briefly, the apparatus uses any one of several sources of ultraviolet radiation. The rays are passed through a special glass filter which excludes most of the visible rays. The wavelengths used are those in the region of 3,200 to 3,700 angstroms. When these rays fall upon hairs infected by any of the species of *Microsporum*, there results a brilliant green fluorescence. Some of the endothrix *Trichophyton*s produce a dull gray or white fluorescence.

Wood's light is therefore useful in diagnosing infections caused by *Microsporum* but *M. lanosum* (animal) cannot be differentiated from *M. Audouini* (human) by this method. It is extensively used in the survey of school children and in the detection of early cases. Two negative Wood's light examinations are usually required before a case of epidemic ringworm is considered cured.

A culture of the organism is essential to the establishment of an etiologic

diagnosis. The media usually used in the United States is a modification of Sabouraud's original dextrose peptone agar. Fluorescent hairs are placed on an agar slant and the culture is grown at room temperature. After seven days, the gross characteristics of the growth will usually enable an experienced observer to determine the genus and specie.

Treatment

Sabouraud recognized in 1910 that instances of spontaneous cure occurred in children with tinea capitis. He also found that this tendency was limited almost exclusively to those cases in which the organism was pathogenic for certain lower animals. Lewis and co-workers⁵ emphasized that cure resulted, either spontaneously or with the aid of topical applications, in all cases in which the causative organism was pathogenic for certain lower animals. In an average time of 7.2 weeks cure was obtained in all of their cases.

Infections caused by the human type of fungi (anthropophilic) are extremely resistant and in spite of treatment with topical applications, will usually persist for years. There is a tendency for the infection to disappear spontaneously at puberty. In cases of minimal involvement, between 15 and 25 per cent may be cured by topical therapy plus the manual removal of infected hairs. Lewis and Hopper⁶ investigated the use of estrogens and gonadotropic hormones, the substitution of lanosun for Audouini and short wave ultraviolet radiation and found them all ineffective. Autogenous and stock vaccines have been tried without success in cases of epidemic ringworm.

Epilation of the entire scalp hair by means of roentgen rays was first successfully employed in the treatment of tinea capitis by Sabouraud and Noire⁷ in 1904. Since then this method has been used in thousands of cases with very few untoward results. Shanks⁸ reported on the epilation of 2400 scalps for ringworm and in this series there were 9 instances of varying degrees of permanent alopecia. Macleod⁹ stated that the average time required for cure by this means was 3 to 4 weeks.

With but minor modifications, the method in general use today is that described by Keinbock and Adanson.¹⁰ It consists of administering 300 r to five, equidistant points, allowing the fields to overlap. Defluvium begins in 18 days and at 3 weeks any remaining hairs are removed with adhesive tape or wax. During the period in which the scalp is devoid of hair, topical applications are used and any remaining hairs are manually removed under Wood's light.

Thallium acetate has been administered internally to produce defluvium by many observers. It was used twice in the series of cases treated at the University of Minnesota Hospitals. It is a highly toxic drug which must be administered with great care. Its use is contraindicated in children who are overweight or underweight, and in children who are nearing puberty. Most authors expressed the opinion that thallium was inferior to epilation by means of roentgen rays but Abramowitz¹¹ stated that it was the method of choice in treating the very young, and children who are mentally defective.

The Present Epidemic

In the 150 years during which ringworm of the scalp has been known, it has at times caused epidemics of considerable severity. Reports of its greatest incidence have come from England and France. Following the first world war an increase in the incidence of the disease was noted in Germany.¹² It was always considered, however, a disease localized to districts, orphanages and schools. According to Lewis and others,¹³ prior to 1943 there was no report in the literature of an epidemic becoming "city wide". In the United States occasional localized outbreaks occurred, and in New York and Chicago sporadic cases have been noted each year.

According to Mitchell, Story and Macdonald¹⁴, an unusual incidence was noted in one school district in New York City in November of 1942. One year later there were several thousand cases in New York. During 1942 and 1943 the

disease appeared in Philadelphia, Niagara Falls, Chicago and Detroit. No estimations have been published concerning the number of cases in New York City after 1943, but Lynch¹⁵ estimated in 1945 that in Chicago there were possibly 65,000 cases.

The Twin Cities

Prior to 1943 tinea capitis was almost unknown in this area. This excludes kerion, which is contracted from cattle, and is fairly common in this area. Since 1943 there have been observed 647 cases in St. Paul and Minneapolis and about 100 from surrounding towns.

	<u>Minneapolis</u> Cases		<u>St. Paul</u> Cases		<u>Total</u> Cases
M. Audouini	51 (80.9%)	. . . . .	584 (100%)	. . . . .	635 (98%)
M. lanosun	9 (14.3%)	. . . . .		. . . . .	9 (1.5%)
T. violaceum	2 (3.2%)	. . . . .		. . . . .	2 (0.3%)
T. crateriforme	1 (1.6%)	. . . . .		. . . . .	1 (0.2%)

Those cases from which *M. lanosun* was isolated appeared very similar, both clinically and in their fluorescence, to the cases from which *M. Audouini* was isolated. In almost all of the cases the lesions were grey patches containing broken hairs, beginning in the occipital region. One case of kerion was observed in which *M. Audouini* was isolated and in 1 instance the eyelashes were infected. The organism was isolated on culture in all of the cases reported.

In no instance was ringworm of the scalp observed in an adult and the ages of the patients varied from 1 to 16 years. The average age for 635 children with infections due to *M. Audouini* was 7.2 years.

Race did not appear to be of importance in the present epidemic in the Twin Cities. Three per cent of the cases observed occurred in Negro children. This is two or three times the proportion of Negroes in the total population, but the number of cases observed in Negro children was only 20.

Boys were infected nine times more frequently than girls.

	<u>St. Paul</u>	<u>Minneapolis</u>
Boys	514 (88%)	46 (90%)
Girls	70 (22%)	5 (10%)

Treatment

No attempt was made to evaluate any experimental form of therapy and the principal aim was to cure each case in the shortest possible time. As previously mentioned, thallium acetate was used in 2 cases with good results and endocrine therapy was used in a few instances. In the great majority of cases, however, either x-ray epilation was performed, or "routine" therapy was used. By routine therapy is meant cutting or clipping the hair and the daily application of fungicides, together with manual epilation of infected hairs under Wood's lamp. Usually manual epilation was performed once a week.

The facilities for roentgen epilation were inadequate in St. Paul, and it was impossible during one period in the epidemic to epilate nearly as many children as desired. In Minneapolis roentgen epilation was performed routinely but the cases were treated too recently to be included in the present report.

Routine therapy was used in those cases where (a) roentgen therapy was not available or was refused, and (b) in selected cases in which the ringworm was localized to one small patch. The criteria for cure were two negative examinations under Wood's light.

Analysis of Treatment of 486 Cases Occurring in St. Paul

	<u>Cases</u>	<u>Cures</u>	<u>Failures</u>
Routine treatment	298	73 (25%)	225 (75%)
X-ray epilation	188	150 (80%)	38 (20%)

Three months was arbitrarily set as the dividing period between treatment failure and success. A few cures occurred in both groups after this period. Routine therapy was used in selected cases and if the entire group was considered, it was successful in but 15 per cent of the cases.

, No difference was noted in response to therapy when the sex of the patients was considered and age of patients had little or no effect on response to therapy.

Epidemiology

An attempt was made to determine the scope of the present epidemic in the United States. Questionnaires were sent to the health officers in each city of over 40,000 population and to at least two cities in each state. They were asked if the epidemic form of ringworm had appeared in their community. Replies were received from 173 of the 220 cities. In 61 cities epidemic ringworm of the scalp had definitely appeared and in 27 additional cities replies indicated that it probably had appeared. Although these figures are admittedly subject to error it is possible to assume that between 30 and 40 per cent of the cities in the nation are experiencing or have experienced epidemics of varying degrees.

From the data obtained it is apparent that the epidemic has become nationwide, and this is the first time that ringworm of the scalp has been known to assume such proportions. The greatest incidence occurs in the East and Middle West. This may be due to New York City, Washington, Chicago and Detroit acting as foci from which other communities are infected.

In the Twin Cities 4 cases occurred in 1943 and the number slowly increased dur-

ing 1944. At the end of 1944 there were 51 cases in St. Paul and 2 in Minneapolis. The first four months of 1945 produced a sharp increase in the number of cases in St. Paul and for a time the epidemic threatened to become out of control. Spread did not occur in Minneapolis until the last quarter of 1945. At the end of 1945 there had been 584 cases recorded in St. Paul and 51 cases in Minneapolis.

<u>Total Cases</u>	<u>Minneapolis</u>	<u>St. Paul</u>
Jan. 1, 1945	2	51
Jan. 1, 1946	51	584

Special School

In St. Paul a special school was opened for children with ringworm of the scalp in October 1945. The usual enrollment was 180 students and it included grades 2 to 8. The operation of this school and the clinic which is contained in the building, costs the city of St. Paul \$1,425 a month. It was estimated that the epidemic will cost the city \$35,000 during 1946.

Suburbs and Small Communities

Approximately 100 cases were observed in children living in small communities. Sporadic cases occurred in two of the suburbs and mild epidemics in three more. One hundred sixty miles to the North of the Twin Cities two neighboring towns produced about 20 cases and 2 cases came to our attention in a city 250 miles north of Minneapolis. In Wisconsin a city 40 miles from St. Paul experienced an epidemic in which 35 children were involved. Another epidemic involving about 35 children occurred in a city 35 miles south of St. Paul.

It appears that the epidemic in the

Twin Cities is acting as a focus of dissemination, although a similar situation has never been previously reported. In a small community a special problem is created because facilities for diagnosis and treatment are not readily available.

Methods of Spread

Ordinary contact is probably the most important method of spread and may be immediate contact as in playing or by means of fomites. Contact as it occurs in the school has, in the past, been considered very important. I believe that the school itself is not a major factor in epidemic spread. The incidence of new cases was as great during the summer months as during the school months and in Minneapolis, of the 17 schools involved, in only 2 schools was there more than one family infected. In St. Paul ringworm appeared in 53 of the 63 grade and junior high schools but in 30 of these there were less than 5 cases.

The occurrence of the disease in siblings demonstrates its contagiousness by means of intimate contact. Contact occurring within the home is of greatest importance in the pre-school group, of which 43 per cent had siblings with the disease. One family was observed from Hastings, Minnesota in which 6 of 9 children were infected.

	<u>Mpls.</u>	<u>St. Paul</u>
1 case in family	30	330
2 cases in family	7	65
3 cases in family	1	10
4 cases in family	<u>1</u>	<u>2</u>
Total	39 fam.	407 fam.

The barbershop has been suggested as a source of spreading ringworm of the scalp by numerous observers. The evidence against the barber is entirely circumstantial and is based on the observation that the disease occurs most frequently in boys (9:1) and that the usual site of onset is the occipital region. It is contended that the clippers and neck brush would carry infected hairs to the occipital region and also explain its increased incidence in boys. In the

present series no attempt was made to examine barbershops and no references were found to any such examinations in the literature.

The parents of most of the children in the present series were questioned and it was found that approximately 80 per cent of the boys and none of the girls patronized public barbershops. The name and locality of the shops attended were recorded but no conclusions resulted.

Movie theaters have been suggested by several authors as a possible means of spreading ringworm. Farley¹⁶ found that hairs infected with *M. lanosum* would produce a growth on culture media after 424 days. Peif¹⁷ believed that this was an important method of spread in an epidemic in Niagara Falls. An attempt to systematically examine the backs of theater seats in Minneapolis for fluorescent hairs, failed because of the reluctance of certain theater managers to have their theaters examined. Direct evidence is available, however, that theater seats may be contaminated with infected hairs.

The children attending the special school for ringworm in St. Paul were questioned regarding theater attendance.

	<u>Attended Theaters</u>	<u>Did not Attend Theaters</u>
Before onset of ringworm	110 (97%)	4 (3%)
After known to have ringworm	89 (78%)	25 (22%)

The names of certain theaters were repeated frequently on the history forms.

The exact role that theater seats play in the spread of an epidemic can not be determined. In my opinion they are an important source of spread, particularly to surrounding districts and new communities. In St. Paul, the epidemic centers around the downtown district and 87 per cent of the children questioned admitted attending theaters after they knew that they were infected.

Control

The contagiousness of epidemic ringworm makes it a public health problem. Specialized knowledge and equipment are needed to combat its spread, and for this reason special clinics should be organized in the presence of an epidemic.

In March of 1945 the disease was made reportable to the health authorities in Minnesota, and in the Twin Cities examination of school children with Wood's lamps was begun. In Minneapolis very few new cases were discovered by this means but in St. Paul 3 to 4 nurses have been continuing these examinations and many cases have been discovered.

Three treatment and diagnostic centers were established. These centers were advised by the county medical societies and were under the direction of the city health departments. Dermatologists directed and supervised their activities. Ancker Hospital served the St. Paul area but in October of 1945 this clinic was moved to the Neil (special) school. In Minneapolis a center was established at the General Hospital and the University Hospitals established a clinic for non-residents of the Twin Cities. General physicians were requested to send their patients with tinea capitis to the center serving their locality and eligibility requirements were relaxed to include all income groups. Children with the disease were excluded from school and a statement of cure was required from the center or from a dermatologist before the child was readmitted.

The State Board of Health cooperated with communities throughout the state in the diagnosis and control of epidemics.

The epidemic is continuing in both of the Twin Cities but it is believed that it is now under control.

It was interesting to observe and compare the epidemics in the two cities. In St. Paul the epidemic was severe and for a period in 1945 threatened to get out of control, whereas, in Minneapolis the number of cases was relatively few. It is odd that two adjoining cities, with similar economic and social levels should

have such different experiences regarding the spread of ringworm. I believe the reasons for this are as follows: St. Paul was one year ahead of Minneapolis in experiencing serious numbers of cases. Thus, in Minneapolis facilities were in readiness and there was little delay in patients receiving roentgen therapy once the diagnosis was made. Secondly, the number of cases did not exceed 50 in Minneapolis and facilities were not overextended. The third feature is the location of the focus of the epidemic in the downtown area in St. Paul. If the seats of movie theaters are of importance in the spread of an epidemic, they were then of significance in the spread of the epidemic in St. Paul. The children from the downtown focus attend the downtown theaters, as did children from various outlying districts and cities. In Minneapolis the focus occurred in an area served by neighborhood theaters and these would not be frequented by children from other districts.

Conclusions

Methods of recognition and treating ringworm of the scalp are discussed.

An epidemic which occurred in Minneapolis, St. Paul and vicinity, involving about 750 cases, is reported.

From our study it is believed that the following contributions have been made:

1. Information gained from questionnaires indicated that the epidemic has become national in its scope.
2. An epidemic occurring in a large city may act as a focus from which dissemination to surrounding communities occurs.
3. Approximately 15 per cent of the cases can be cured by topical applications and manual removal of infected hairs.

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III. GOSSIP

Rutgers University has just announced a graduate training program for general medical practitioners. They plan to utilize the out-patient department facilities of Cooper Hospital in Camden. The venture is a joint undertaking of Medical Society of New Jersey and Rutgers University. The period of training is 36 months and will include experience in dispensaries, conferences and seminars. Twelve months will be devoted to training in medicine, three months each to pediatrics and surgery, six months to obstetrics and gynecology, twelve months to specialties, both medical & surgical. The evident weakness in the plan is the fact that the physician who takes the course will only be required to be present at the hospital twice a week for 2 or 3 hours. Other weaknesses are the distribution of time to each subject and limitation of instruction to three years. In the original prospectus, mention was made of a thesis. The good points in the program are recognition of the need for training men for general medical service and the use of clinical facilities instead of lectures. It would be difficult to promote such a course as a graduate venture here if present day standards are not changed but the University of Minnesota is in the process of changing its concept of graduate education to make it coincide with changes in education. Graduate study up to present has been limited to specialization in one field (vertical). In line with general trends graduate education may be offered on a horizontal plane. Our experience with continuation course in Medicine at the Center continues to be illuminating. This week in Neurology, A.B. Baker has selected those phases of neurology of general medical interest. Technique of neurologic examination, Guillan-Barre syndrome, exogenous toxic encephalitis, diagnosis and treatment of brain tumors, peripheral nerve lesions, Parkinson's Disease, localization of spinal cord lesions, multiple sclerosis, subacute combined degeneration, poliomyelitis, headache and its treatment, muscle dystrophy, myasthenia gravis, brain trauma, vascular disease of central nervous system, treatment of epilepsy, treatment of syphilis of central nervous system, cerebral complications of pneumonia, neurologic roentgenology, etc. Afternoons, the group have been seeing the same types of patients they heard about in the morning. In teaching undergraduates,

it may continue to be necessary to expose them to the entire subject at least the first time around, but in teaching graduate students their relationship to other specialties and the content of their own, the functional approach which has been used at the Center this quarter has much to commend it. The present groups at the Center will complete their courses March 29. Final examinations will be given in each subject. Continuation course in surgery will start April 8 and end June 29. Plans for a second course in Medicine are being drawn at the present time to start sometime after July 1. A special course in Psychotherapy for General Practitioners and Non-psychiatrists will be given April 1 to 13 inclusive. Thirty physicians will take this course which will overlap with the Continuation course in Surgery and the Continuation Course in Basic Sciences. The Basic Science group will study pathology, biochemistry, pharmacology, and bacteriology during spring quarter as they have completed their anatomical dissections and most of their physiology. The plan to limit attendance to in-state students applies to undergraduates only ...Dr. Donald W. Hastings, our new head in Neuropsychiatry, was born in Madison, Wisconsin, June 14, 1910. Dean Middleton his old professor, who was here last week, was warm in his praises of Doctor Hastings's ability. He is a Wisconsin, Philadelphia, Harvard product. He was Chief Psychiatrist for the Eighth Air Force in England, later Chief Psychiatrist for the A.A.F. redistribution command, and finally for the entire Air Force. He is a member of numerous professional societies, and has an excellent list of publications. In line with the new thought in the field, he is concerned with the teaching of psychiatry to all medical graduates, the training of specialists in his field and investigation ...Dr. Gaylord W. Anderson, head of the School of Public Health, who served as Director of the Division of Medical Intelligence for the Surgeon General, is as busy as ever. His division collected all available information on disease in areas which might be occupied by our troops. Global epidemiology as developed by Doctor Anderson is one of the great contributions of the war effort.