



"The necessities of things are sterner stuff than the hopes of men."

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BULLETIN

of the
**Mahoning
County
Medical
Society**

Vol. XI No. 8
August 1941



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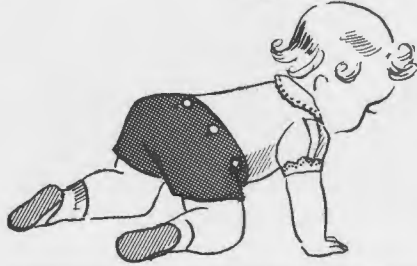
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PRESIDENT'S PAGE

July and August! America!
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 Campaigns!
 Political Speeches! Congressional Debates! Propaganda!
 Aid to Britain Short of War, Convoys, Patrols!
 Isolationists! Interventionists! War! War! War!

July and August! Europe! Asia and Africa!
 Nazism! Fascism! Communism! Dictators!
 Marching Troops, Guns, Tanks, Dive-Bombers, Lies!
 Warships, Commercial Shipping, Convoys, Submarines!
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 Bombings, Sinkings, Fires, Explosions, Destruction!
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 Hunger, Cold, Blackouts, Bomb-Proof Cellars!
 Misery, Debauchery, Hideous Wounds, Death!

How long, O! God! Shall America Be Spared?

O. J. WALKER, M. D.
President

BULLETIN *of the* Mahoning County Medical Society

AUGUST 1941

Editorial---

Work Goes Forward

At this season of the year, when many of us go on vacations, and when even those of us not that lucky "let down," we commonly think of Society affairs as being more or less "vacationed" too. Such is found, on inspection, not to be the situation.

During these hot days,—and nights—Committees go right on.

There's the Program Committee. Dr. Evans is on the job. He has lined up a top-notch for our very next, September, meeting. Dr. S. Milton Goldhamer, of the Thomas Henry Simpson Memorial Institute, Ann Arbor, Michigan, will justify one of our full-swing audiences of 200 to 300 listeners.

For the Postgraduate lectures this Autumn, on October 30th, we have a star, a world celebrity in his line, Dr. Tom D. Spies. Every doctor in this valley ought to be on hand. It will be an all-day affair. The subject matters of the lectures are very important, Dr. Spies knows more about them than perhaps any other man in the world, and he knows how to present his knowledge, from a doctor's standpoint, as effectively as any of the many brilliant speakers, who have lectured before our Society. We have every good reason to be grateful, and we hope to share our good fortune with all our Professional neighbors.

The Committee on economics has not abated its activities one whit. They have, under the leadership of Dr. Luke Reed, continued their studies of Medical Service Plans, and will presently be prepared to offer one of the most carefully considered of all plans yet produced.

To make our play pleasant, our Social Committee, Dr. Jim Brown, chairman, has been carrying on splendidly. The party held at the Southern Hills in July was a fine one, well-attended, and the spirit of good-will was evident everywhere. The Committee expects to give another for us in August. These parties are fine fun and of great practical value.

Of course, Dr. McNamara is on his toes, and the work of examining Army Selectees, under his leadership as chairman of the Medical Defense Committee, instead of lagging, has increased markedly in efficiency, right through these hot days.

Time marches on, but the Mahoning County Medical Society keeps pace with it.

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PAROXYSMAL VENTRICULAR TACHYCARDIA

By BEN GREEN, M. D.

Intern, Youngstown Hospital Association

(This paper delivered before Mahoning County Medical Society, June 17th, 1941.)

Definition: Paroxysmal Ventricular Tachycardia is a form of tachycardia in which the rate is between 100 to 240 beats per minute. In addition, the electrocardiographic tracings must definitely establish the fact that the cardiac impulses responsible for the rapid ventricular rate are of distinct ventricular origin. Also the ventricular complexes must be both preceded and followed by auricular complexes of slower rate. Finally the ventricular complexes must be abnormal in form and there should be a definite irregularity of time spacing not met with in any of the other forms of paroxysmal tachycardia.

Etiology: The true etiology of this condition is very difficult to prove. It is often associated with organic heart disease. Fifty-three cases showing paroxysmal ventricular tachycardia and organic heart disease showed: cardiovascular hypertensive disease 30%, coronary disease 22.7%, rheumatic heart disease 15%, arteriosclerotic heart disease 7.5%, syphilitic heart disease 7.5%, thyrotoxic heart disease 3.75%, and type of heart disease not clear 13.2%. In 64 cases of reported paroxysmal ventricular tachycardia there were 11, or 17.2% which showed no clinical or laboratory evidence of pathology other than the arrhythmia. Digitalis had been given before the onset of tachycardia to 50% of the cases, all of these naturally falling in the group presenting definite cardiac disease.

In some cases the withdrawal of the digitalis caused a return to normal rhythm, and again giving digitalis caused recurrence of the arrhythmia. In other cases there was no such effect.

Numerous explanations for the production of the arrhythmia have been advanced. First, that a single irritable ectopic ventricular focus

causes the tachycardia; second, bi-directional alternation of the complexes suggested blocking of the left and right branches of the conduction system alternately. This seems unlikely. White suggests circus movement in the ventricles similar to that giving rise to flutter of the auricles, or to rapid stimulus production at one or two sites.⁴

While all of these suggestions are interesting and thought provoking, it is probable that as White says—"The mechanism of ventricular paroxysmal tachycardia is not known."⁴

Pathology: There is no constant pathology in this condition. There is, however, associated organic heart disease in over 82% of the cases. The most common types of organic heart diseases associated are those already mentioned—cardiovascular hypertensive disease, rheumatic heart disease, arteriosclerotic heart disease, syphilitic heart disease, and thyrotoxic heart disease.

Clinical Diagnosis: Suspicion of the presence of paroxysmal ventricular tachycardia must be aroused whenever a rapid, either regular, or almost completely regular rate supervenes in a case of long standing heart disease, particularly if large doses of digitalis have been used, or in a case of coronary occlusion.

Physical examination reveals a heart beating at a rate generally of 160-180 per minute. The beat is regular or almost completely regular. A slight irregularity is typical of ventricular tachycardia. Vagal stimulation and ocular pressure are never effective in terminating a paroxysm of ventricular tachycardia.

Positive diagnosis is possible only with the electrocardiograph. There are certain criteria which have been set up for fulfillment before a diag-

nosis of paroxysmal ventricular tachycardia is warranted. The criteria were set up by Robinson and Herrmann⁵ and are as follows: 1) The electrocardiographic tracings must definitely establish the fact that the cardiac impulses responsible for the rapid ventricular rate are of distinct ventricular origin. 2) The ventricular complexes must be both preceded and followed by auricular complexes of slower rate. 3) The ventricular complexes must be abnormal in form, and should there be any isolated extrasystoles preceding or following the paroxysm, these must resemble in type the ones seen during the attack of tachycardia.

In this connection, Robinson and Herrmann point out that the abnormal ventricular complexes alone cannot serve as proof of ventricular origin, for their bizarre form may be produced by intraventricular conduction disturbances. If, however, at the termination of the paroxysm no such disturbed conduction is exhibited, the unusual form of the complexes will serve further to substantiate their ventricular origin. Robinson also brought out the fact that, when the cardiac rate is very fast, conduction disturbances may often be overlooked. The diagnosis can be made still more certain when, as was pointed out by Strong and Levine⁶, the rapid succession of ventricular complexes discloses a slight but nevertheless a definite irregularity of time spacing not met with in any of the other forms of paroxysmal tachycardia.

Course: In the absence of organic heart disease any attack may run its usual course. The tachycardia often persists in spite of all treatment until it spontaneously remises. In many cases quinidine will convert the heart to normal rhythm. In one case although quinidine failed to convert the rhythm after being used diligently, withdrawal of the drug resulted in termination of the tachycardia.

Pulsus alternans is of serious import in almost any heart condition. In a heart without organic disease and in an attack of paroxysmal ventricular tachycardia the prognosis is usually favorable. Generally the heart will go on to recovery. In a few instances the heart will fail to revert to normal rhythm, and after developing pulsus alternans will go on to cardiac failure. Even here the process may be reversed and eventual recovery occur, though the future is not as bright as in the previous case. Occasionally a heart in paroxysmal ventricular tachycardia will go on to pulsus alternans, ventricular fibrillation and death.

The outlook in cases where the heart shows no pathology other than the arrhythmia is almost uniformly good.

In cases showing definite evidence of organic heart disease the prognosis is much poorer. Eighty-two percent of the fifty-three cases with concomitant organic heart disease reviewed by Dr. Strauss¹ died within three hours to six months of the onset of the tachycardia, with an average of 24 days of life. Most of these received no specific treatment.

Treatment: The most valuable treatment to date is quinidine, generally employed in the form of the sulphate. Doses as high as 7.5 grams a day have been utilized, while maintenance doses as low as 0.2 grams a day have been used. Generally after an initial trial dose of 2 grains is given to test the patient for sensitivity to the drug, 4 grains may be used every four hours in an attempt to revert the rhythm. The dosage must be varied to suit the individual needs. Although the quinidine may fail to revert the rhythm when given orally, intravenous administration in 5% glucose in dosages of from 10 to 40 grains given slowly may serve to do so. The toxic symptoms noted by patients receiving quinidine intravenously begin with a sensation of

"sand in the eyes." This is followed by "blurring of vision, tinnitus, vertigo, and nausea." Then the patient may complain of a sensation of burning over the entire body. Even larger doses may cause unconsciousness and severe generalized epileptiform convulsion. On the return of consciousness tinnitus, vertigo, headache and diminished acuity of hearing may be present for several hours. The convulsions occurred in a case of Drs. Strong and Munroe of Vancouver, B. C.³ The patient was given 40 grains of quinidine sulfate intravenously after trying mechohyl, ergotamine, and prostigmin with no result.

One other drug deserves mention, namely quinine dihydrochloride. This drug is given intravenously in dosage of from 3 to 20 grains. It must be given *very* slowly, generally with one person listening to the heart while another injects the drug slowly and at the listener's request. A maintenance dose of quinidine of 4 grains or more per day may be needed to prevent recurrence of the arrhythmia.

Prognosis: The prognosis is almost uniformly good for those cases where only the arrhythmia is present. If there is concomitant organic heart disease the prognosis is grave, 80% dying within 6 months. In any case the condition is apt to recur, even if the quinidine is continued in maintenance dosage.

Of the 20 cases of tachycardia in the Youngstown Hospital Association since 1935, none are unequivocally paroxysmal ventricular tachycardia. A case of tachycardia which shows so many features similar to a true case of p. r. t. as to be helpful will be presented briefly. This is a case of parox, tachycardia which is supra-ventricular in origin. The patient was seen from February 22, 1941, to March 13, 1941, on the Obstetrical Service at the North Side Hospital of Youngstown, Ohio.

Case of M. A. L. Age 25, white female.

The patient came to the hospital as a term pregnancy with membranes ruptured and having mild labor pains. She had a history of attacks of, as she said, "heart flutter" for many years. On an average she had four such attacks yearly. Generally, the attacks came on when she got very excited and lasted about 5 min. She found that lying on the right side served to help terminate an attack. She gave no history of ankle edema, dyspnea, or other cardiac difficulty.

Physical examination revealed a normal 25 year old white female with twin pregnancy at term. Blood pressure at this time was 125/85. Heart slow, rhythm regular, no cardiac dilatation and no murmurs. Within 12 hours of admission she had received 6 grains of quinine to increase her very mild labor pains. At 5:00 p. m. on February 22, 1941, she suddenly complained that her heart was beating very rapidly. Examination at this time showed that her heart was now beating at a rate of 160 beats per minute where previously it had been beating at a rate of about 80. The rate was almost regular, the heart size the same as on previous examination, and the pulse could be counted with some difficulty at the wrist. The blood pressure was the same as previously. In treating the tachycardia she was given a 3 grain test dose. Then in the first 24 hours she was given 15 grains of quinidine sulfate. This had no effect on the rate, which stayed 160 to 180 beats per minute in spite of 30 grains the second 24 hours, 19½ grains the third day, and 15 grains of quinine dihydrochloride intravenously. This did slow the rate from 180 to 142 per minute. Mecholyll cc. which caused flushed face, dizziness, slight nausea and sweating. In addition she had 12 grains quinidine. Labor was progressing *very* slowly and cervical dilatation was stationary at 5 cm. X-rays had been

taken earlier in the course of the labor and the diagnosis of twin pregnancy had been verified. No dystocia was present and the presenting twin was descending by vertex. It was thought advisable to terminate labor as soon as possible, and to this end a No. 6 Voorhees Bag was inserted. This was expelled and the next morning she was delivered of fraternal twins, first twin by vertex and second one by breech. This was after a labor of 92 hours, 6 min., with a rest period of 10 hrs. During delivery the heart was beating from 180 to 240 times a minute. Ether anesthetic was used. The first day post partum, and the fourth day of the tachycardia she received 9 grains of quinidine and 1 cc. of mecholyl. On this day she developed rales at both bases and the pulse was more markedly of the alternans type than it had been since the third day of labor when it was first noticed. Half of the beats came through at 110 and all of them at 100. On the fifth day she received 9 grains of quinidine, and morphine sulphate grains 1/6. The rate dropped to 112 apex at 11:30 p. m. or 126½ hrs. after the tachycardia began. There was a soft precordial murmur heard over the entire precordium, and not transmitted. This persisted for about 4 hrs. after the heart returned to normal rhythm. The pulse rate never rose above 112 after once returning to normal type rhythm. The size of the heart returned to normal after about 24 hrs. She was placed on 3 grains of quinidine daily and was discharged with a pulse of 85 and a blood pressure of 112/88.

An inspection of the case reveals: 1) A history of previous attacks in a patient without evidence of organic heart disease. 2) A prolonged labor with progressive rise in the apex beat to 240 at delivery with development of pulsus alternans, rales at the bases of both lungs, and slight cardiac dilatation. There was no edema or dyspnea. 3) Drop in pulse pressure from 40 points on admission to 10

points before the rhythm finally reverted to normal. There was a drop in systolic pressure from 125 to 110 mm. Hg. 4) Failure to convert the rhythm to normal using quinidine, intravenous quinine dihydrochloride, and subcutaneous mecholyl. 5) Final reversion to normal rhythm with persistence of general precordial systolic murmur for four hours after reversion. This murmur was probably due to dilatation of the cardiac rings. Dr. King of Johns Hopkins in a personal communication says that he has seen such cases with an embolus in the pulmonary conus which subsequently moved on with disappearance of the murmur. 6) The heart returned to normal size. 7) The patient was maintained on 3 grains of quinidine without recurrence of the tachycardia. 8) A prognosis in this case would be excellent for life because of the lack of organic involvement of the cardia.

Note—Her attending physician has seen her since her discharge and she is in good health and has had no subsequent attacks to date. She probably will have attacks sometime in the future.

In summary it may be said that the ventricular tachycardias are not common: that when suspected paroxysmal ventricular tachycardia is suggested clinically by a history of previous attacks of rapid pulse. On examination a pulse of 100-240 is found with the average being 160 to 180 beats per minute. Vagal stimulation and ocular pressure are never effective in terminating an attack. An electrocardiograph is the only way of making the diagnosis certain. The course is often unaffected by therapy but quinidine is the drug of choice. In many cases 4 grains every 4 hours will revert the cardiac rhythm to normal. In case this fails, mecholyl subcutaneously, or quinine dihydrochloride given with caution intravenously may revert the rhythm to normal. The prognosis is excellent

in cases without organic heart disease. In those cases with organic heart disease the prognosis is grave, 80% of the accepted cases in the literature up to 1930 dying in an average of 24 days from the onset of the tachycardia. Some of these died as soon as 3 hours, others lived as long as 6 months. In advising a patient without organic heart disease for the future it is safe to say that longevity will probably not be effected but that the attacks will almost certainly recur. In advising a patient after an attack where the patient has unmistakable evidence of organic heart disease the advice will naturally take into account the type and severity of heart disease present, but the prognosis is always grave, as 4 out of 5 cases die within 6 months.

In concluding may I say that I hope that this paper may serve to

recall this most interesting condition to you. Please let me thank you for your courteous attention.

Bibliography

- 1) Paroxysmal Ventricular Tachycardia—by Maurice B. Strauss, M. D. The American Journal of the Medical Sciences, Vol. 179, Jan.-June, 1930. Pages 337-345.
- 2) Paroxysmal Ventricular Tachycardia: Report of a case illustrating all the accepted diagnostic criteria. By Aaron E. Parsonett, M. D. Annals of Internal Medicine, Vol. 9, July, 1935, to June, 1936. Pages 1258 to 1265.
- 3) Paroxysmal Ventricular Tachycardia with Report of an Unusual Case—G. F. Strong, M. D., and D. S. Munroe, M. D. Vancouver, B. C. Pages 486 to 492.
- 4) Heart Disease—White. Pages 249 to 251.
- 5) Robinson and Herrmann (Heart 1921, vol. VIII, 59).
- 6) Strong and Levine—Heart 1923, vol. X, 125.

HEMOLYTIC JAUNDICE

By D. J. BIRMINGHAM, M. D.
Intern, St. Elizabeth's Hospital

(This paper delivered before Mahoning County Medical Society, June 17th, 1941.)

On December 3rd, 1940, a 39-year-old white female entered the Medical Service of Saint Elizabeth's Hospital with complaints of abdominal pain and jaundice.

She related that during the past five years she had been afflicted with intermittent episodes of upper abdominal discomfort, characterized by pain in the right upper quadrant and at times in the epigastrium. This pain is never sharp, it never lasts for more than two or three hours, and never radiates to any other abdominal area. These bouts of pain are always accompanied by nausea and oftentimes by vomiting. The vomitus being of thick, greenish, bitter material. Furthermore, following these attacks she suffers with an intensification of jaundice.

In reference to the jaundice her history is most interesting, in that

the condition began when she was 16 years of age, in other words, 23 years of jaundice. Of particular interest is the fact that during each of her five pregnancies, the jaundice had subsided only to reappear shortly following delivery.

There is no history of clay colored stools. She has never suffered from any abnormal bleeding phenomena. There is no history of toxic drug intake.

The systemic history failed to present any pertinent facts relative to the present illness.

In regard to the family history—Mother died of carcinoma of the uterus following a long illness of many years of jaundice. Her father, husband, and one daughter are living and well. One sister is living and apparently well but has had jaundice for many years. Four children are

dead; one son died following appendectomy, the child was making an uneventful recovery when he suddenly expired, with no conclusive evidence as to the immediate cause of death. One child was still-born with prolapse of the cord. Two premature infants are dead, one died at the age of a few days following birth, the other died at the age of two years following pneumonia. None of the offspring were to her knowledge born with jaundice.

Physical examination revealed a well nourished and developed white adult female, coöperative and intelligent. She has a marked tinge of icterus, but lies in bed devoid of pain or discomfort. Her height is 5' 5½". Weight, 140 pounds.

The physical examination of the head, nose, mouth, neck, failed to show any pathology. Cardio-respiratory system did not show any sign of active disease. Blood pressure, 130/70; heart not enlarged, no arrhythmias or murmurs. Abdomen was thin, a few striae are present and on palpation definite tenderness is demonstrable over the area of the gall bladder. Moreover, the spleen is easily palpable, no estimation as to the amount of enlargement was made.

Skin was markedly icteric, there were areas of eruptions (punctate) on the extensor surfaces of the extremities. Prurigo was present.

The impressions made at the time of admission were:

1) Chronic Hemolytic Jaundice with superimposed Cholelithiasis.

2) To be necessarily considered and excluded; Obstructive Jaundice. Pernicious Anemia. Other blood dyscrasias.

On the day of admission, the following tests were performed:

1. RBC—3,330,000. WBC—8,500 with normal Schilling hemogram. HB—13.2 gms.

2. Fragility—Initial .40. Complete .34 (normal .43—32).

3. Urobilin—.22 gms./24 hours. Bilirubin negative.

4. Reticulocytes—8.4%.

5. Clot retraction—35 minutes.

6. Coag. time—4' 15".

7. Hematocrit—33.

8. Icterus Index—61.

GB series revealed a faintly filling GB 12-12 hours after the oral administration of dye with at least five small shadows ringlike in nature suggestive of stones in the GB. Two hours after the fatty meal the GB was empty except for the stones.

At this time and with the above evidence, the service felt correct in warranting the diagnosis of Chronic Hemolytic Jaundice. However, in view of the fact that the cell fragility did not measure up to expectations, further evidence was sought in other members of the family with the following results:

Daughter, aged 14—Normal fragility and RBC. Reticulocytes, 2.4%.

Sister—Initial .50. Complete .30. Reticulocytes—14.3%. RBC—4.1.

Thus the diagnosis of increased erythrocytic fragility was found to exist in at least one known member of the family.

Five days following admission, a surgical consultation was requested and subsequent verification of the medical diagnosis was made plus a recommendation for surgical treatment by splenectomy.

The patient was typed for transfusion and the routine preoperative medication was administered prior to surgery. In addition, this patient received the injection of Adrenalin to cause contractility of the spleen and thus evacuate excess blood from the organ. The Adrenalin was administered when the patient was on the operating table.

The spleen at operation, in spite of Adrenalin injection, was enlarged. Calcified deposits were found in the GB but there was no obstruction of

Former Internes' Reunion

The 1941 Reunion of Former Internes of YOUNGSTOWN HOSPITAL will be Thursday, August 14th, 9:00 A. M.—South Side Unit of Youngstown Hospital—for Clinical Session and General Inspection.

LUNCHEON FURNISHED AT NOON

(It Is On The House)

Then to the Youngstown Country Club—tee off at this championship course at 1:30

Golf Prizes — Dinner 6:30

Music — Entertainment

Mark Off The Date Now!
THURSDAY, AUGUST 14TH

Dr. H. E. Kerr, Sec'y, Internes' Reunion Committee

Annual Picnic

- Thursday, September 11th
- Millikin's Farm

EATS - - - FUN - - - SPORTS

Regular Monthly Meeting

Tuesday, September 16th

YOUNGSTOWN CLUB

DR. S. MILTON GOLDHAMER

Assistant Professor, Dept. of Internal Medicine, and Research Assistant, Thomas Henry Simpson Memorial Institute for Medical Research, Ann Arbor, Michigan.

Fall Lectures

October 30—Afternoon and Evening

YOUNGSTOWN CLUB

DR. TOM D. SPIES

Director, Nutrition Clinic, Hillman Hospital, Birmingham, Alabama.
Associate Professor of Medicine, University of Cincinnati College of Medicine.
Professor of Medical Research, University of Texas School of Medicine.
Professor of Medical Research, University of Alabama School of Medicine.

the cystic or common ducts. Patient was returned from surgery in good condition. Following surgery she was transfused with 500 cc. of whole compatible blood without reaction.

The pathological report of the spleen was as follows:

Grossly: A soft, red, wrinkled, and enlarged spleen 18x10x5.

Microscopically:

Sinusoidal congestion.

Moderate reticular hyperplasia.

Slight hyperplasia of lymphoid splenic follicles.

Fresh fibrous proliferation of the trabeculae.

Considerable increase in pigmented phagocytes.

For five days following surgery patient enjoyed a splendid postoperative course taking fluids readily and maintaining normal temperature. A red blood cell count at this time was 4,909,000. HB—14 gms. From the 7th to the 17th postoperative days, this patient underwent a very stormy and somewhat disconcerting postoperative course. Septic symptoms such as temperature rise, marked elevation of leucocyte count, drop in RBC and HB became evident following pulmonary complaints. Repeated physical examinations corroborated by fluoroscopy and x-ray examinations, excluded subdiaphragmatic or perinephritic abscess formations as well as substantiated the presence of localized pulmonary infection. By the 25th postoperative day, the patient was discharged in good health, her jaundice obliterated, physical condition excellent, and having marked satisfaction over her course of treatment.

Discussion

Time does not permit a thorough and detailed discussion of this case, it seems necessary, however, to briefly evaluate and interpret the clinical laboratory tests used in establishing his diagnosis.

Hemolytic jaundice was observed as early as 1885 and was described in fair detail by Hayem in 1895. However, it remained for Minkowski to realize the familial connection of the disease, and for Chauffard to demonstrate the phenomena of Erythrocytic fragility; spherocytosis; and Reticulocytosis. Thus we have often heard this type of jaundice referred to as Minkowski-Chauffard type.

We definitely know that chronic familial jaundice is a disease characterized by:

1. An inherited tendency with definite Mendelian basis.
2. Recurrent or prolonged attacks of jaundice.
3. Variable degrees of anemia.
4. Splenomegaly.

It is classically a true hemolytic anemia because of the excessive destruction of red blood cells which are inherently defective. It may occur in any race, in any sex, and is most often seen in early adult life. This is thought to be due to the fact that the very active adolescent hemopoetic centers are able to maintain a cellular equilibrium in spite of the red blood cell destruction until the adult age is reached, when the changes which occur in hemopoetic centers at this time allow a manifestation of the disease to take place, and as a consequence the patient presents himself for diagnosis.

The diagnostic features of this disease which the clinician is anxious to demonstrate may now be enumerated:

(a) It is basically agreed that the fundamental element in the disease is a peculiar type of red cell, characterized by its size and shape. Its diameter is smaller than normal, its thickness is greater than normal. It is not a biconcave disc but a sphere. Here is the derivation of the term *MICROSPHEROCYTE*. Thus we have an explanation why these patients, even in view of an anemia

and seemingly smaller cell, actually do have a normal or almost normal volume index. The test used in determining the volume index is known as Hematocrit or volume of packed cells. Calculation of this patient's Hematocrit, which was 33, and RBC of 3,330,000 in ratio to normal values, will show a volume index of 1.

(b) The second characteristic property of the red blood cell in hemolytic jaundice is its increased fragility in hypotonic saline. This is a less constant finding, however, than the aforementioned spherocytosis. This is because variable factors other than cell shape may alter or influence the fragility. Haden states that a patient with a thick red blood cell possessing a very resistant envelope can show little actual change in fragility. We were confronted with this same problem in this patient who exhibited an almost normal fragility test. Thus, we sought and obtained further familial evidence in testing the sister whose fragility began at .5 and was complete at .34.

(c) Reticulocytosis: It has been universally established that the hemopoetic response in any anemia is indexed by the reticulocyte count. Reticulocyte counts in this disease may range from 5 to 60%. In this case as in the sister with respective figures of 8.4% and 14.3%, these values are not high but they definitely indicate two points; first, that the both bloods were examined during remissions of the disease rather than during an exacerbation; and secondly, that there was an effort of the blood forming centers to throw cells into the peripheral stream.

(d) Urobilin: Whenever there is an increase in blood destruction, there is obviously an increase in hemoglobin and necessarily in blood bilirubin. Now we know that blood bilirubin is carried to the liver where by action of the liver cells it becomes bile bilirubin. The bile then migrates

into the GI tract via the common duct and in the GI tract is acted upon by the existing bacterial inhabitants to become urobilinogen. This, in turn, may be reabsorbed into the blood stream and taken to the liver to be converted into bilirubin, it may be carried to the blood forming centers to be converted into hemoglobin, it may be excreted in the stools as stercobilin, and a minute amount is excreted in the urine, namely 33 mgs. per 24 hours. In this case the urobilin content was 220 mgs., eight times greater than normal, and the bilirubin was negative. Thus we rule out an obstructive jaundice because when bile cannot be excreted into the GI tract it never does become urobilinogen but is reabsorbed into the blood and we have bile bilirubin in the blood stream. The kidney can excrete this pigment because of its low threshold; furthermore, the pigment has been separated from the blood plasma by the liver.

(e) In regard to the gall stones. In this case as in 60% of all cases of hemolytic jaundice, gall stones are present. Hematologists and clinicians agree that these patients have a hypercholesterolemia. They believe this to be the basis for formation of stones. We did not have a cholesterol determination run on this woman, suffice it was to demonstrate gall stones by x-ray.

These then, are the best known diagnostic implements necessary to clinically establish this disease, not forsaking, of course, the all important history and thorough physical examination.

There are, no doubt, some questions left unanswered about this case, particularly is the question, "How is the patient today?" Six months following treatment by splenectomy we obtained these blood indices:

RBC—5,200,000
 HB—16
 Reticulocytes—1.2%
 Hematocrit—50

which is truly a remarkable change. It proves then, that something can often be done for these patients. She still has her "days of jaundice," never so severe as before, but we must not forget in these cases that the extended period of disease is quite conducive to liver damage, especially a biliary cirrhosis, which in itself can account for hepatic insufficiency.

There is no question that much is yet to be learned about familial jaundice, its causes and peculiarities. Turch puts it very well in stating that, "The hemolytic diseases are the children, the spleen is their mother, the father is still unknown and most likely there are several fathers."

THANKS, DR. WEST!

Dr. Claude B. Norris,
244 Lincoln Avenue,
Youngstown, Ohio.

Dear Doctor Norris:

A copy of the Bulletin of the Mahoning County Medical Society came to my desk and while I was eating my lunch I read with most genuine interest and with very great pleasure your contribution to the Bulletin under the heading "Two Years After." All of us who are doing our best to discharge the duties assigned to us in connection with administrative affairs of the American Medical Association are, of course, greatly heartened by encouragement that is offered to us through statements like that which you were good enough to contribute to the Bulletin of the Mahoning County Medical Society.

In April, 1942, if I am spared so long, I shall complete my twenty years of official connection with the affairs of the American Medical Association. In that time, my respect and esteem for the House of Delegates as a body and for its individual members has grown constantly greater. I have had opportunity to observe the work of official bodies of various

organizations over a period of forty years and I can say without the slightest hesitation it is my considered opinion that there is no more earnest and sincere body nor one more desirous of doing whatever is best for the promotion of the art and science of medicine and for the betterment of the public health than the House of Delegates of the American Medical Association.

I regret exceedingly that you are to withdraw from active participation in the affairs of medical organization, but sincerely hope that you are going to enjoy a long period of comparative leisure.

With my heartfelt good wishes for your health and happiness, I am,

Very sincerely yours,

OLIN WEST.

(The above from Dr. West is being carried in the Bulletin—

(a) Because it reveals Dr. West's long and devoted personal service;

(b) Because of his discussion of the House of Delegates, and

(c) Because of that well-meant, but, in one respect, erroneous paragraph as to the part of it which reads ". . . but sincerely hope that you are going to enjoy a long period of comparative leisure!"

No, no! No, Dr. West, you're good and all that for saying it, but that isn't my plan nor my idea at all. I'm not of very "retiring" disposition, you know. Mrs. Norris and I, enthusiastic dunces that we are, have become entangled with a farm. But here in Youngstown we "long for me to practice long"—and as long as I practice I shall be head-over-heels in "active participation in the affairs of Medical Organization." Weak and idiotic as maybe some good friends suppose me to be, our profession needs us all and we propose to splash around trying to help for a good while yet!

CLAUDE B. NORRIS, M. D.

August

THE MEDICAL CRIER

A Page of Sidelights, News and Views in the Medical Field
(Thoughts in couplet arising from Doctor's Golf Day.)

You wouldn't think to look at him
A'crouching there so small,
With body bent most double
His stern eye on the ball,
That he was versed in medicine
A man of great renown—
That eyes are turned, that hats are
doffed
When he goes through the town.

You wouldn't think to see him swing
With such a lack of grace,
With arms stuck out akimbo and
Despair upon his face,
That he could yank a tonsil out
With hand quite deft and sure—
Or take the gravest kind of case, and
Always know the cure.

He moves the club head to and fro
His gaze sweeps o'er the sward
His mind's made up, his purpose clear
He's going to smite it hard.
His body sways, his head moves too
He swings with awkward style. . .
The ball still sits upon the tee
He missed it by a mile!

He gives the crowd an angry glance
Who was it moved or spoke?
Who coughed or sneezed or scraped
his feet
Who was it cracked that joke?
He'll try again, let all be still
Come, luck and do your stuff
The ball sails out, he hit it well
But sliced it in the rough.

Now starts the long trek through the
wilds
To hunt and hunt that pill.
The sweat stands out upon his brow
He's mad enough to kill.
Ah! there it is behind that stump

Now what a place to flop!
The only thing that's left to do
Is chop and chop and chop.

He looks around, there's no one near
One kick would help the score,
One kick, it's done—the green's in
sight—
He calls for number four.
O trusty iron, come bite the turf,
Let divots fly and spin—
The ball describes a graceful arc
And lands dead on the pin!

One putt, it's down. The heavens
smile
The sun is warm and fair
The grass how green, the sky how
blue

The earth how free from care!
He struts away well satisfied
When they count up the score
One took a five, two counted six,
Says he, "Give me a four!"

And so it goes from tee to green
And back again to tee
Like ships that tack a zig-zag course
Across a stormy sea.
Until at last the game is done
The sun is sinking low,
He drags himself back to the club
With footsteps tired and slow.

You wouldn't think to see him now
When this hard day is done,
That he could stay up half the night
For work or just for fun.
No wonder that his life is short
But he enjoys it well.
His fun is work, his work is fun
The difference, who can tell?

—J. L. F.

PILL ROLLERS ROLL PILLS

Eat, drink and Get Gay! Fifty-one golfers (the pill-rolling pill-rollers and 95 drinking-eaters) or (eating-drinkers, take your choice, either or neither it's all the same to this reporter!), with their friends, the Dentists and allied conspirators, regimented themselves for fun at Southern Hills, Thursday, July 24th, afternoon and dinner.

They had a good time, and that's the truth. If you weren't there you just ought to have been. If you are in the habit of enjoying innocent monkey business that "potty" would have been your oyster. If you are not—it still would have been good red herring to you,—something to frown at,—lack of dignity, hilarious laughter, ribald singing,—all that indecorous stuff, beneath the dignity of doctors, and such! Gee! You could have had marvellous sour enjoyment! So, either way, don't miss these meetin's!

Here're the statistics: Bill Welsh and John Rogers tied 78 each for low gross. That establishes a feud. They must play the tie off in 3 games, according to the donor of the prizes, the Medical-Dental Bureau. A trophy and a golf bag are to be fought for,—as well as for the honor of dear old Fairwater! Not altogether bad was Wenaas, whose 81 ranks him as a fairly good player.

Following is the rest of the record of prize winners, who got white "balled" for their prowess:

Low putt: S. Schwebel; closest to pin, Wolpert 3 balls, F. Schooling 3 balls. Longest drive, Geo. McKelvey.

Blind Bogey: Paul Mahar, 3 balls; C. V. Dobson, 3 balls; R. R. Morrall, 3 balls; P. J. Fuzy, 3 balls. The following 1 ball, Frank Irwin, Wm. Taylor, J. D. Brown, D. V. Bender, H. E. Kerr, J. C. Vance, S. Ziegler, C. Askue, S. J. Tamarkin, J. L. Price, A. Marinelli, P. J. McOwen, M. H. Belmont, W. J. Tims, Hardman, W. Welsh, J. A. Rogers.

Door prizes of all sorts were passed out,—but this business of trying to keep up is too much,—and just who got what from whom dependent declareth not for certain. McElroy won a black golf bag donated by Lyons, and for Fred's information, Luke Reed will use the bag, while McElroy ought to "trade" ten dollars worth with you "over-and-above."

Jimmy Fisher got a radio from Earl Huffman, only because, friends, only because, his number was 49! Kupec's prize, a handbag, too, came from Mead-Johnson Co. Jones Drug gave Yarmy an electric clock. Tubby Kerr got a poker set from Humphrey's, and big-hearted Tubby gave it to the Council of the Mahoning County Medical Society. The Council will now meet earlier and stay later (if possible!). Hank Osborne got five bucks "merchandise" from our old reliable Charles Scott outfit. Charley Scofield went home with a thermos jug.

Turner's skill in raffling netted him a set of "woods." The lucky "draw" made a swell profit on his buck. Jack Thompson the Pro, produced. Paul Fuzy was the winner of a bottle of toilet water. Ralph White is sure taking care of you, Paul.

It was impossible during the melee to follow all that was going on. But, according to Wm. Welsh, the following friends donated prizes. We are grateful to all these and if in listing any names are omitted, it is unintentional.

Ashton's Pharmacy, Bittner's Pharmacy, Bovee's Pharmacy, Cassaday Pharmacy, Colonna Pharmacy, Cross Drug, Dobson's Pharmacy, Duncan Drug, Foster Pharmacy, Goodwin Pharmacy, Hewit-Bel-Del Pharmacy, Humphrey Drug Co., Earl B. Huffman, Idora Pharmacy, Jenkin's Drug, Jones' Drug, Leake's Drug Store, Laeri's Apothecary Shoppe, Lyons Physician Supply Co., Medical-Dental Bureau, McConnell & Schrag Drug, Peoples Drug Store, Starr Drug, Scott Co., Weinberger's Drug, White's Drug, Yengling Drug.

LADIES' AUXILIARY

June 30, 1941.

Mrs. John Noll, Secretary
Woman's Auxiliary to the
Mahoning County Medical Society
Youngstown, Ohio.

Dear Mrs. Noll:

Having been asked by our State President, Mrs. J. Edwin Purdy, to serve on the Nominating Committee, the writer met with seven other members present at the Carter Hotel, Cleveland, Ohio, June 1st, and presented the following ballot to be voted upon by the House of Delegates the following day:

President Elect—Mrs. P. E. Oldenburg,
Cleveland;

Vice President—Mrs. H. M. Clodfel-
ter, Columbus;

Sec'y-Treasurer—Mrs. J. L. Stevens,
Mansfield.

And the following Board of Di-
rectors:

1. Mrs. William Freyhof, Cincinnati;
2. Mrs. H. W. Kandall, Covington;
3. Mrs. H. R. Jarvis, Van Wert;
4. Mrs. D. J. Slosser, Defiance;
5. Mrs. C. L. Cummer, Cleveland;
6. Mrs. R. B. Poling, Youngstown;
7. Mrs. C. W. Kirkland, Bellaire;
8. Mrs. R. M. Meredith, Marietta;
9. Mrs. A. P. Hunt, Portsmouth;
10. Mrs. J. W. Wilce, Columbus;
11. Mrs. R. F. Fasoli, Brunswick.

The meeting of the House of Delegates was called to order by Mrs. J. Edwin Purdy at 9:00 o'clock, June 2nd, at the Carter Hotel. After welcoming remarks by Mrs. Purdy and Mrs. C. L. Cummer of Cleveland, and the Invocation by the Reverend Theodore Evans, Mrs. J. L. Stevens, Secretary-Treasurer, read the rules of the meeting which had been adopted by the Board. The annual reports of the officers and chairman of standing committees were read, a summary of which is given later.

Mrs. Purdy offered the services of the entire State organization to the Ohio State Medical Association, saying the by-word of the Auxiliary is, "Service—especially health service. The Auxiliary is not a club—we are members because we have the privilege of being doctors' wives. It is not just social, but for a definite purpose to serve the medical profession."

The Report of the Nominating Committee was read and the officers elected as given above.

The proposed Amendments to the Constitution and By-Laws were read, five of which were "Clarifying Amendments," the sixth that the Nominating Committee may offer names for office of president-elect as well as for other offices to be filled, and retains provision that nominations may be made from the floor for all offices to be filled. These amendments were accepted.

Mrs. David Thomas, National Auxiliary Treasurer, installed the new officers.

A gavel made of wood from the old McKinley home had been presented to the Auxiliary by the Canton Chamber of Commerce, and at this time was handed by Mrs. Purdy to Mrs. W. H. Curtiss, our newly installed President, as her symbol of authority. In her acceptance speech Mrs. Curtiss said our program should be informative, educational, and social. The meeting was then adjourned.

At the luncheon immediately following brief remarks were made among others by Mrs. V. E. Holcombe, our retiring National Auxiliary President; Mrs. R. E. Mosiman, the incoming President; Dr. W. H. Skipp, the retiring President of the Ohio State Medical Society; and Dr.

Harry V. Paryzek, President Elect, who said the sole purpose of the Auxiliary is to help the profession—in defense aid, in legislative work; in medical care plans for low income groups so they can budget for their health and still maintain the right to have the physician of their choice; to promote and maintain the health of the people. Dr. C. L. Cummer commended Mrs. Purdy upon her ability, wisdom and tact. Brief remarks were heard, also, from Dr. R. L. Rutledge and Dr. Barney J. Hein of the State Advisory Council to the Auxiliary.

From the annual reports read earlier in the morning it was noted that out of our eighty-eight counties in Ohio (87 of which have organized County Medical Societies) we have 27 organized counties with a total membership of nearly 1700, placing Ohio fifth in the list of 39 organized states. As you know, the State is divided into Districts of which there are 11, each District has at least one organized county, and the 6th and 11th Districts lead with five organized counties. The 6th being our own, directed by Mrs. R. B. Poling, is comprised of Stark, Columbiana, Trumbull, Summit and Mahoning Counties organized, leaving Portage alone unorganized.

Having been elected at the State Meeting as one of Ohio's delegates to the Woman's Auxiliary to the American Medical Association, literally hundreds of reports and brief talks were heard with much overlapping and repetition of facts. The election of the National Auxiliary officers was held, and the installation of the officers for the coming year was very impressive in striking contrast to the installation of the State officers; marked sentiment was shown in the presentation of the Presidents' pins to Mrs. V. E. Holcombe, retiring President, and Mrs. R. E. Mosiman, the newly installed President.

However, the same reports come from all of our organized states as from our counties in Ohio in regard to health service. Loan funds have been established to aid sons of doctors and deserving medical students to complete their last two years of medicine. Rooms in tuberculosis hospitals have been equipped. Some auxiliaries maintain a hospital room for patients from families, while not on relief, are in financial difficulties, perhaps because of continued illness or other misfortune. Other auxiliaries financially aid a young girl through three years of nurses training, or buy the necessary graduating clothes for a needy high school graduate. Glasses, cod liver oil and milk have been furnished where needed. To make the layman health conscious Health Essay Contests have been held in the schools. Some states have "Doctors' Day"—in connection with this is a dinner, radio broadcasts, etcetera.

It was suggested that the county histories be kept carefully, and brief summaries of outstanding activities be sent to the state historians who in turn make reports for the national archives.

Subscription was urged to the Bulletin of the Woman's Auxiliary to the American Medical Association. It is published quarterly and presents activities over the entire country.

Respectfully submitted,

MRS. DEAN (HELEN) NESBIT.

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FEMALE SEX HORMONE THERAPY

By CHARLES H. WARNOCK, M. D.

Some impressions gained during a month's course of study with Dr. Elmer L. Sevringhaus, Professor of Medicine, University of Wisconsin.

MENSTRUAL DISTURBANCES

The occurrence of regular and fertile menstrual cycles depends on the following endocrine factors: secretion of estrogenic hormone by the Graafian follicle, maturation and liberation of a mature ovum, secretion of progesterone by the corpus luteum. These in turn are dependent upon stimulation of the ovaries by the anterior pituitary gland.

Disorders of menstrual functions and of fertility, from an endocrine standpoint, are in most cases due to ovarian hypofunction. Irregular and infrequent menses, amenorrhea, menorrhagia, anovulatory flowing, and ovarian sterility are not to be considered so many separate entities but different manifestations of lowered ovarian activity. Such ovarian failure may be primary, the ovaries being unable to respond to pituitary stimulation, or secondary to failure of the pituitary to provide adequate gonadotropic stimulation.

Diagnosis—In the study of menstrual disorders, two special diagnostic procedures are available to the clinician. Study of the vaginal smear, according to the technique of Papanicolaou and Shorr¹, provides a quantitative estimate of the intensity of estrogenic activity and also gives objective evidence of the success of a given therapeutic plan. Endometrial biopsy, taken shortly before a menstrual period, will determine the presence or absence of ovulation and subsequent progesterone effect. Assays of blood and urine for estrogenic and gonadotropic hormones, and urinary pregnandiol determinations are as yet only for the research clinic.

Therapy—In deciding upon a therapeutic plan, both clinician and patient should have the therapeutic goal clearly in mind. If merely subjective relief of the vasometer and mental

symptoms which frequently accompany ovarian hypofunction is desired, therapy with estrogenic material as ordinarily used at the climacteric is permissible. However, if restoration of menstrual regularity and especially of fertility is the desired objective, and this is usually what the patient seeks, avoid the use of estrogens and employ gonadotropic preparations to stimulate ovarian activity. If, after a reasonable period of treatment with adequate doses of potent and standardized preparations, there is insufficient evidence of improvement then it must be concluded that the ovaries are incapable of responding to stimulation. The patient must then content herself with subjective relief which can be provided by ovarian replacement therapy. Accurate diagnosis by means of vaginal smear study and endometrial biopsy should precede any plan of treatment.

Preparations—Two types of material may be employed for ovarian stimulation. The first is pituitary gonadotropic hormone derived from animal pituitary gland and available commercially as Prephysin (Stearns), Gonadotropic Factor (Armour, or Ayerest, McKenna and Harrison), Gynantrin (Searle), Ambinon (Roche). This is not to be confused with the chorionic gonadotropin made from pregnant women's urine and marketed under such names as A. P. L., Antuitrin-S, Follutein Antophysin, etc. The anterior pituitary like hormone from this source does not stimulate the ovaries, hence is not to be used for those syndromes where ovaries are underactive.

The other type of material is pregnant mare's serum (P. M. S.) available as Gonadogen (Upjohn), Gonadin (Cutter), Anteron (Schering). Unfortunately, there is at present no agreement on a biological unit for

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standardization of pituitary gonadotropic preparations, each manufacturer using his own unit. The equine gonadotropic preparations are now marketed in terms of an international unit.

Administration—Being water-soluble, preparations of these two types act quickly and for brief periods, hence are administered as a series of small doses given daily or on alternate days, hypodermically, for 5 to 15 doses. Since follicular growth is more marked at the beginning of a menstrual flow, such a series is begun on the first day of flow and this continued not later than the 15th day, the approximate time of a normal ovulation. A similar series will usually have to be repeated with several successive cycles before results are achieved. Little benefit can be expected from the use of a few doses. If flow does not occur, a new series of treatments is begun after 28 to 30 days. It is obvious that such therapy requires a large number of treatments and is costly. For these reasons, patients are taught to administer their own injections just as they are taught to give their own insulin.

When it is desired to initiate ovulation, pregnant mare's serum is given as a single large dose intravenously, preceded by a series of smaller hypodermic doses to stimulate the follicle to maturity, and followed by 4 to 6 more daily doses hypodermically to sustain the action of the corpus luteum.

PITUITARY DISORDERS

There is no scientific basis for the rational use of whole pituitary gland products orally. We now have available some fractions of the anterior pituitary hormone in known, standardized, and potent form. The gonadotropic factors described above are standardized and potent. The growth factor may be obtained either alone (e. g. Antuitrin-G) or in prepara-

tions containing the other known factors (e. g. Polyansin). In treating retarded growth before puberty, it is wise to choose a preparation containing only growth factor, to avoid gonadal stimulation. Much less is known clinically regarding the use of thyrotropic and adrenotropic hormones.

ORAL ESTROGEN THERAPY OF THE MENOPAUSE

The use of oral preparations of estrogen is effective and possesses the advantages of flexible dosage, convenience, and avoidance of deposits of vegetable oils which accompany intramuscular therapy. Four types of estrogenic material are available: estrone, estriol, estradiol, and mixtures of these with other less potent substances. Considerable confusion exists regarding the relative dosage required of these various materials. Some are standardized in terms of international units, others of rat units, others of "active biological units" and "day oral units," and still others in milligrams of pure hormone. The only logical basis for comparison at present is the cost to the patient per effective dose. Despite the advertising claims with which the medical profession has been bombarded recently, the synthetic substance estradiol is less effective on a cost basis than are mixtures of the natural estrogens. Three preparations of the latter type which appear to be about equally effective, unit for unit, are Amniotin, Estrolin and Estromone.

The average dose required for control of mild menopause symptoms is 4000 international units daily. Patients having moderately severe symptoms will require 8000 to 12,000 units daily for initial control. The daily maintenance dose must be determined in each individual case by gradual reduction of dose. Study of the vaginal smear provides an objective criterion of the effectiveness of therapy. More than 20,000 units daily is rarely required.

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trol appears to be as effective as any of the preparations now available, in dosages well tolerated by nearly every patient. It seems likely that this compound when eventually placed on the market will largely supplant the more expensive preparations now available.

DYSMENORRHEA

Endocrine treatment of menstrual pain is still unsatisfactory. Women and girls having associated genital hypoplasia are sometimes benefited by gonadotropic therapy. The occasional relief following estrogenic hormone administration may depend on improvement of uterine hypoplasia, although in some patients the pain has been intensified by this treatment. The administration of progesterone in doses of 1 mg. for 2 to 5 doses shortly before the period is sometimes beneficial. Thyroid therapy has been employed with some degree of success, used empirically as it long has been in a variety of endocrine disorders.

PREMENSTRUAL TENSION

For relief of the distressing syndrome termed premenstrual tension, advantage may be taken of the dehydrating action of ammonium chloride to overcome the associated water retention. Potassium nitrate in doses of 15 grains several times a day has recently been reported as the most effective salt for this purpose. This type of treatment might be tried in other obscure cases of headache.

Reference

1. PAPANICOLAOU, G., and SHORR, E.: Action of Ovarian Follicular Hormones in the Menopause, as Indicated by Vaginal Smears. *Am. J. Obst. & Gynec.* 31: 806, 1936.

LAY EDUCATION, JULY

WKBN

July 11, 1941—Dr. C. M. Askue—
Topic, Camps for Children.
July 18, 1941—Dr. Vern Goodwin
—Topic, Swimming Hazards.
July 25, 1941—Dr. J. C. Hall—
Topic, Something for Nothing.

1941

NEWS

Dr. and Mrs. James B. Birch and son, Tony, have returned from a trip to Canada.

Dr. and Mrs. Paul J. Mahar spent a short time vacationing in New York and Atlantic City.

Dr. and Mrs. Marvin B. Goldstein have returned from a fishing trip to Berliegh Falls, Ontario, Canada.

Dr. and Mrs. A. E. Alsaesser spent a short time in Manchester, Mass., visiting Miss Laura Wick at her summer home.

Dr. H. E. McClenahan was in Canada on a fishing trip.

Dr. and Mrs. C. W. Sears and children, Mary and Richard, were in Wyoming, Iowa, visiting with Dr. Sears' parents.

Dr. and Mrs. Barclay M. Brandmiller are spending two weeks at Camp Fitch, North Springfield, Pa., where Dr. Brandmiller is acting as camp physician.

Dr. and Mrs. John A. Welter and their daughter, Margot, have left for a several weeks motor tour through the East and New England.

Dr. D. H. Smeltzer has returned from a Seminar at Buffalo University for all the psychiatrists of the Medical Advisory Boards of the Northeastern states.

Dr. and Mrs. Samuel Wood Weaver drove their son Sammy to Ash-tabula to attend the Jack and Jill Camp for two weeks.

Dr. and Mrs. John McDonough spent a delightful two weeks at Lake Placid Club in the Adirondacks. Dr. McDonough is still continuing his post graduate work in surgery and gynecology at Woman's Hospital in Detroit.

Dr. and Mrs. Edward J. Reilly announce the birth of a daughter, Elizabeth Rose, July 29th, St. Elizabeth's Hospital.

Dr. and Mrs. A. L. Williamson of Niles announce the birth of a son, James Norton, on July 4.

Annual Joint Meeting of the Cleveland Otolaryngological Club and the Pittsburgh Otolological Society

The members of the Cleveland Otolaryngological and Pittsburgh Otolological Societies held their annual joint meeting May 21, at the Youngstown Country Club. This fifth annual meeting was arranged for golf and dinner. It was decided last year that after a year of scientific papers, the Youngstown joint meeting would be limited to social activities.

The afternoon was spent playing golf, about thirty-five members of the two societies teed off after luncheon at the club house. Everyone seemed to enjoy their golf and those whose scores were not so good took new hope on the nineteenth hole.

The members present and their guests assembled for dinner in the tap room. As usual Dr. J. W. McCall of Cleveland and Dr. Thomas

McCullough of Pittsburgh led the song fest. Golf trophies were presented by the club professional, Albert Alcroft, with a good deal of comment from the assembled gallery concerning claimed handicaps. The trophy changed hands again, it was won by Pittsburgh. Cleveland held the trophy last year. Dr. Paul Moore of Cleveland had the low gross score for individual play.

The Medical-Dental Bureau orchestra was kind enough to furnish the music. When the singing got too loud for the orchestra, they very sportingly ceased to play and joined in with the songsters.

Many had to return home after dinner but there were several who remained to try their luck with African dominoes to complete another pleasant day of good fellowship.

FINDINGS FROM THE FIELD

Salute the Commander-in-Chief

(Kansas City Medical Journal)

It has been said that the greatest weakness of a Democracy rests in the fact that all improvement, all progress, all change within such a country depends upon an enlightened public opinion. This was the viewpoint of Goethe while living under the protection of the Weimar Republic but within the shadow of the Prussian influences. It is just as simple to insist that an enlightened public opinion is the strength of Democracy.

In our United States we are undergoing a tremendous surge of propaganda efforts to influence public opinion. Our emotions are shuttled back and forth daily with the efforts of this minority and that organized grouping to arouse us to action.

It is probably true that our President understands the political significance of enlightened public opinion better than any president we have

had for many years. This has been both a strength and a weakness of his political success. It can now be gauged as a strength when we stand in the presence and pursuit of a war to preserve some measures of democratic freedom.

The President is now emerging successfully from a tremendous battle between his political allegiance to a huge minority who supported his election and his patriotic duty to demand the support of this very group for the pursuit of successful defense and aggressive engagement with a Hitlerian ideology.

Our President has been going through with a big battle within himself and he now comes forth as the Commander-in-Chief of all the forces of our country. To this Chief all of the officer and enlisted forces have reaffirmed their allegiance. To this Chief all citizens must display an active allegiance without the im-

posed oaths of those in the services. To this Chief it now appears that those contentious minorities who have delayed the implements of defense and war are ready to accept the responsibilities that can insure success.

Our Democracy rests upon elections that are chronologic, every four years. We cannot change our President, who is our Commander-in-Chief, until this spaced interval arrives. We have elected our Commander-in-Chief through a fair election. Those who were a large part of this electing majority must accept the commands of the Chief and it appears that they are ready. Those who voted against the present Commander-in-Chief have the same responsibilities of allegiance and confidence as though they were a part of the electing majority.

We can all be for the Commander-in-Chief even though we were not of his party or of his thinking at the time of election. We must be for the Commander-in-Chief even though we were not for his presidency. Our President has grown into the Commander-in-Chief. We must grow from partisanship to unity with him.

Salute the Commander-in-Chief!

—E. H. S.

The Medical Caduceus

"The Symbol of Aesculapius, the God of Healing, is a staff with one snake twisting around it. The Symbol of Mercury, the God of Gaming, Commerce and Communications, is the Caduceus, a staff with two snakes symmetrically entwined. The United States Public Health Service, the University of Chicago Press, the Medical Corps of the United States Army, innumerable hospitals and not a few medical societies hold doggedly to the decorative but rather misleading emblem of the patron of taking chances, taking profit and carrying tidings elsewhere.

"Granted that Mercury is not without therapeutic indications, nonetheless architects and engravers, trus-

tees and Congressmen should be implored to confine the use of the Caduceus to the adornment of the Stock Exchanges, the Chambers of Commerce and Post Offices and be cured of seeing two snakes where one would better indicate the sober dignity of the Aesculapian tradition."

Alan Gregg: Humanism & Science. Bulletin, New York Academy of Medicine, Feb., 1941.

Drugs Designated As Dangerous

J. Lester Hayman, Ph. C., M. S.,
Dean, College of Pharmacy, West Virginia
University

(Reprinted from Pittsburgh Medical Bulletin)

. . . In order that there may be a correct understanding between the physician and the pharmacist, the Federal Government holds the manufacturer and dispenser liable for the distribution of any drugs which may be dangerous to health (502[j]). The enforcement department has, however, in various citations specifically named certain drugs which they deem to be dangerous. The drugs which have been named as such thus far are given in the following list:

Aminopyrine; ammoniated mercury ointment, if over 5% ammoniated mercury; aspidium; barbiturates; benzedrine sulfate; carbon tetrachloride; chenopodium oil; cinchophen; digitalis; mercuric chloride ointment, if over 0.2% mercuric chloride; neocinchophen; santonin; squill; strophanthus; sulfanilamide; sulfapyridine; sulfathiazole; tetrachlorethylene; thymol; thyroid; acetanilid, if the total daily dosage is more than five grains or more than two and one-half grains during any three-hour period; bromides, if in a total daily dosage of more than 30 grains or more than 15 grains during any three hour period; combinations of bromides and acetanilid, if in total dosage of more than 15 grains of bromide and five grains of acetanilid or more than seven and one-half grains of bromide and two and one-half grains of acetanilid during any three hour period.

The drugs enumerated in the fore-

going list, as well as other drugs dangerous to health, should be dispensed only on a prescription of a physician, dentist, or veterinarian. Such prescriptions should be plainly marked "Do Not Refill."

"However, on the specific authorization (written, verbal or telephone) of the prescriber such prescription may be refilled a 'reasonable number of times.' (It is strongly recommended that such prescriptions not be refilled more than two (2) times unless a new prescription is written by the prescriber. The pharmacist assumes the full responsibility for refilling such prescription.)

"When refilling on physician's authorization, date and hour and compounder's name should be recorded on the back of the original prescription or prepare and file a new prescription indicating on the prescription that it represents the first or second refilling of the original order. Such records are necessary when refilling on verbal authorization but are not necessary if you receive a new prescription written by the attending physician."

In view of the above the physician should cooperate with the pharmacist in refraining from recommending to patients that they purchase dangerous drugs and in regard to the refilling of prescriptions either by plainly marking the prescription "Not to be Refilled" or by courteously giving the proper information when contacted concerning refills.

It is hoped that the information contained herein may be of material assistance to physicians in complying with the Federal Food, Drug and Cosmetic Act.

—West Virginia Medical Journal, January, 1941.

A Few Common Mistakes

(Illinois Medical Journal)

1. It is incorrect to say the patient had "no temperature." One may say there was "no elevation of temperature," but it is shorter to say there was "no fever."

2. "Acute appendicitis" is common, but an appendix can not be "acute."

3. "Shot" is perhaps the most abused and overworked word in medical literature. Shot is of lead.

4. "Tubercular" means "nodular"; "tuberculosis" means "infected with the bacillus of tuberculosis."

5. "Case" must not be used for "patient," nor "cure" for "treatment."

6. "Cystoscope" is a noun and must not be used as any other part of speech.

7. It is possible to "operate a cotton-gin," but it is not possible to "operate a patient"—nor his appendix.

8. "Pathology" means the "science of disease"; it is therefore absurd to speak of "pathology in the right lung."

9. "Specific" and "luetetic" are convenient to obscure meanings from patients' relatives, but "syphilitic" is better in writing for the medical profession.

10. "Positive" serology" is the worst type of jargon; apparently "positive Wasserman reaction is usually meant.

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