Bloodletting was formerly in vogue as a routine procedure when it was desired to reduce the blood pressure, but in healthy animals the vasomotor center exercises such perfect control over the blood pressure that the loss of blood produces very little lasting effect unless it is so great as to cause collapse symptoms. While the loss of a moderate amount of blood is well borne by robust patients, and in some cases may even prove beneficial, aconite and the nitrites are nearly always to be preferred as temporary measures, while the control of the diet (including liquids) and the use of saline purgatives will serve to diminish the amount of blood for a longer time in suitable cases.

Chloral hydrate is one of the most effective agents in our possession for lowering the blood pressure by depressing the vasomotor centers and while this action is much employed in laboratory experiments, it is not elicited in man by perfectly safe doses such as are used to induce sleep.

Clinical Notes, New Instruments, Etc.

A PECULIAR INFECTION OF CERTAIN CERVICAL GLANDS WITH TYPICAL LOCAL AND GENERAL SYMPTOMS.

HELIODOR SCHILLER, M.D.

CHICAGO.

Under the title of "Pfeiffer's Glandular Fever" I recently published reports of five cases and I have since had an opportunity of seeing six similar cases.¹

A close study of these cases and comparison with those already reported, shows that they do not correspond exactly with the cases described by Pfeiffer, but that they have distinctive features which may be considered as those of a well characterized and typical disease.

CASE 6.—On October 24 I was called to see a baby boy, aged 2½ years. Since the previous evening the child had had fever, had coughed somewhat and had vomited once.

Course of the Disease.—When I first saw the child his temperature was 102 F., his throat was reddened and several râles could be heard over the lungs. He was constipated, and for this calomel was given. Next morning the temperature was 99.8, and the following day 103. The redness in the throat had disappeared entirely on the fourth day and the temperature was 101, with no other symptoms. On the fifth day the glands on the left side of his neck, especially those before and behind the proximal end of the sternocleidomastoid, were very much swollen. The swelling came on rather suddenly; on the previous day there was no trace of it, and it consisted of three enlarged glands, each larger than a hazelnut, and of the consistency of hard rubber. Each swollen gland was distinctly palpable. The skin over the glands was normal, the glands were hardly tender, and somewhat painful only on hard pressure.

Cultures taken from the throat and from the seropurulent discharge from the nose on the second day showed streptococci and staphylococci. Throughout the disease the temperature ranged from 101 to 104.5. There was no exanthema on the skin or scalp, and nothing abnormal in the ears.

On the tenth day the glands on the right side of the neck were found to be swollen and showed the same characteristics as the glands on the other side. This swelling was followed by higher fever and vomiting. Adenoid vegetations in the throat were present in a slight degree. Constipation was obstinate and the child lacked appetite.

On the eleventh day the baby complained of pain in the ear, but nothing pathologic could be seen there. The liver and spleen were both found enlarged, and the mother noticed that the urine, which on the eighth day was normal, was lessened in quantity on the twelfth day. It was found to contain

1. The Journal, A. M. A., Aug. 5, 1905, p. 401. The cases reported in this article are numbered consecutively following those reported in the previous article.

albumin and some white and red blood cells. On the sixteenth day there were traces of albumin only.

The fever continued for three weeks and a half, reaching as high as 104.6 degrees, but in spite of this the baby did not look very emaciated. The glands swelled more; I had the impression that they were smaller on some days, but the day following they would seem as large as before. The fever disappeared gradually and at the end of the fourth week it was gone. The glands became gradually smaller. When the temperature became normal the appetite came back, the baby recuperated quickly, and by December 15 the glands were reduced to the size of a small pea. Dr. Abt saw this case with me.

SUMMARY OF CASE 6.

At no time was any fluctuation felt; the glands were always movable, there was no periadenitis. The teeth were normal and there is no history of tuberculosis in the family. There was no sign of scrofulosis nor was there any symptom which would allow me to consider the case as an acute tuberculous infection of the glands. It is known that in cases of acute infection of glands with tubercle bacilli, with the formation of a large amount of epithelial cells, and consequent infiltration with round cells, the glands may swell in a comparatively short time, considering the chronic character of the tuberculous disease. These glands may swell to double their size inside of a week or ten days, but never over night; besides, the more acute tuberculous infections of the glands are invariably followed by caseous degeneration, and then by suppuration, whereas in the case just referred to absorption took place.

The so-called hypertrophic form of tuberculous glands most often disappears by conservative treatment, but it comes on very slowly and its course is contrary to the one here described. It is afebrile, and other symptoms tending to tuberculosis will not be missing. In this case there was sudden onset of fever, weak feeling, headache, backache, and then the sudden and large swelling of the cervical glands, which are not painful, but only slightly tender, and hard in their consistency, swelling of the spleen and of the liver, nephritis, constipation, mouth-breathing, decline of the fever by lysis, slow absorption of the inflamed glands and slow disappearance.

We can not very well call this a case of common tonsillitis, because the pathologic changes which the tonsils and the throat showed, were very little. The sympathetic swelling of the glands in a case of tonsillitis is different, the glands are painful and disappear with the disappearance of the process in the throat or suppurate. Also the affection of the kidneys, spleen, and liver, in so marked a degree, and the long lasting fever are certainly not the symptoms of tonsillitis.

CASE 7.—A woman, aged 34, called on me September 14. She said that on September 9 she felt ill, had a headache, pain in the back, was very weak, and that toward evening she noticed a swelling of the glands on the left side of her neck. She believed that this swelling, which was not painful at all, came from her teeth, but her dentist failed to find any reason for trouble from that source. A physician who paid a friendly visit prescribed a liniment, which was used without result, and the swelling grew constantly, but did not cause any trouble. At no time was there any pain in swallowing, or very much pain in the swollen glands, except in quick movements of the head.

Examination.—When I saw the patient the temperature was 100, pulse 88. On the left side of the neck there was a glandular tumor the size of a child's fist, composed of two distinctly separated glands before and below the proximal part of the sternocleidomastoid. This swelling was hard and elastic and not very tender. The heart and lungs were normal; the liver was somewhat enlarged. The tonsils were enlarged with deep but empty crypts. The palate and pharynx were reddened,

there was no skin affection, the ears were normal, urine was normal, and the patient complained of weakness and nausea.

Course of the Disease.—On September 16 the temperature went to 103, and on September 17 to 103.5. The glands were still hard but movable; there was no fluctuation and no marked periadenitis. On September 18 I made a trial puncture and at the depth of more than an inch I found a thick yellow pus, which I removed by incision. That evening the temperature went to 104.4, and then gradually subsided and was normal on September 21. On September 26 the incision was healed, but the glands were still enlarged, though very much reduced in size; the patient felt fine and began to gain.

On the evening of September 26 I was called to her, and, to my surprise, I found the glands just behind the sternocleidomastoid in its upper part swollen, and one gland in the middle of the neck also swollen to about the size of a nut, hard and not very tender. The whole thing came on in a few hours; the temperature rose to 100.6 and the pulse to 96. There was no pain except in moving the head; the throat was normal, but a general weakness was felt.

On September 27 the condition was the same, the highest temperature was 101, and the urine contained traces of albumin. The fever increased and the swelling of the glands was the same.

On September 30 I again made a trial puncture, and found one-third of a Pravatsche syringeful of pus in the gland behind the sternocleidomastoid. I made an incision along the needle, but found no more pus.

The temperature gradually subsided and on October 6 it was normal once more, but the swelling did not decrease in size, though there was no fluctuation. Trial punctures revealed no pus. On October 26 I advised x-ray treatments, and after ten treatments with medium hard tubes at 10-inch distance and ten minutes' exposure by Dr. Reichman all the glands disappeared. In the pus of the glands typical influenza bacilli and streptococci were found. The blood examination showed leucocytosis 13,000.

SUMMARY OF CASE 7.

The objection could be raised that the process was nothing but a common tonsillitis. Not all cases of tonsillitis are followed by pain in the throat, the affection in the throat or tonsils is accompanied by large yellow plaques, is very often found there by change, and patients do not always complain of pain there. The changes in the tonsils could have disappeared quickly, but the whole course of this disease is not at all similar to any of the hundred varieties of tonsillitis; the sudden swelling of the glands, their consistency, the slight tenderness, the increase in size after the supposed process in the throat disappeared, the finding of influenza bacilli in the pus, and the lengthy duration of the process are enough to show that we have to deal with a well characterized, distinct disease.

CASE 8.—A girl, aged 2½ years, the daughter of the patient in Case 7, five days after an attack of rhinitis and pharyngitis, which lasted two days, complained of pain in her ears and neck, and vomited once or twice.

Examination.—The tonsils were red and somewhat swollen. There was a seropurulent discharge from the nose; the ear drums were somewhat retracted; the lungs and heart were normal. The child was healthy looking and seemed to be a well nourished, strong baby. In the discharge from the nose staphylococci and large diplococci were found, but no diphtheria bacilli were demonstrated in the specimen taken from the throat.

Course of the Disease.—The next morning the glands on the left side of the neck, on both sides of the upper end of the sternocleidomastoid were swollen to the size of a hazelnut, being hard, not very tender and movable. The child was constipated, breathed through her mouth and was very cross. The redness in the throat disappeared in two days, but there was no change in the course of the disease.

On October 13 a thick pus was removed by an incision

from one of the glands, and in the pus were streptococci only. The other glands, which did not suppurate, remained about the same.

By October 20 the incision was healed. Then rather suddenly, without any symptoms other than temperature of 101, the symmetrical glands on the right side began to swell, traces of albumin were found in the urine, and the temperature kept rising until October 30, when the spleen and liver were distinctly enlarged. The glands on the right side were easily movable, hard, elastic, with the skin above them perfectly normal, and they remained about the same.

After the disappearance of the fever the child improved quickly, the glands became smaller and in the beginning of December they were reduced to the size of small peas.

CASE 9.—The servant in the family had a very similar but much milder affection.

CASE 10.—This was a case belonging undoubtedly to this species, but was very mild, though showing all the symptoms.

CASE 11.—This patient, a boy, 7 years old, had had a cold for several days, and suddenly, on the evening of November 8, it became worse. He had headache, felt weak and complained of pains, especially in the abdomen, but also to some extent all over.

Course of the Disease.—Temperature was 100.8, pulse 102. His throat was red, and the next morning the glands on both sides of the neck were swollen, but the right side was the worse. Except for a slight fever and the swelling of the glands, no other symptoms were present, the throat being normal and the highest temperature 100.8. The boy felt well, had a good appetite and did not want to stay indoors. After the fever disappeared the glands became somewhat smaller. There was no exanthema, no peeling of the skin.

On November 24 the boy did not act normally, and the mother observed that there was blood in the urine. A specimen showed all the signs of an acute hemorrhagic nephritis. During the next twenty-four hours 11 ounces of bloody, dirty-looking urine were passed, and the next day 15 ounces. In spite of this the boy felt well and did not believe that he was sick. His temperature was 100; the spleen and liver were enlarged.

On November 26 the urine, 56 ounces, contained albumin, granulated and epithelial casts and cubic fatty degenerated epitheliums.

On November 30 the urine contained traces of albumin, only at this time also the glands were very much reduced in size, and the latter part of December had nearly disappeared.

SUMMARY OF CASE 11.

In this case there was not one symptom of common tonsillitis. Of more importance in this as well as in the case of the little girl is the "cold," which may have been the source of the infection of the glands. The patients hardly felt sick, the only symptom in the beginning of Case 11 was the swelling of the glands and a slight fever, scarlatina could be excluded.

SUMMARY OF ALL CASES.

I have observed eleven cases of a well-characterized disease. The most striking and characteristic symptom of which is the sudden swelling of certain glands of the neck. In Case 1 the swelling of the glands was noticed the evening before any pain in the throat started. The enlarged glands in Case 2 were observed by the mother before the boy complained of any pain in the throat or neck, and in Case 3 immediately after the first chills the glands were observed to be swollen.

In Case 6 the swelling appeared on the fifth day, while in Case 7 the swelling of the glands was observed on the evening of the day when the patient first felt sick; the second swelling of the glands came as a surprise to both patient and doctor, and was the first symptom of the relapse.

In Case 8 the swelling occurred on the second or the

fifth day, respectively. In Case 11 the glands swelled the second or the fifth day—according to whether we count the “cold” in the disease or not. In neither of these cases was the swelling of these glands accompanied by any severe pains. The glands were not tender, but were hard, they showed no marked periadenitis and what must be considered as especially characteristic, the swelling concerned most often the glands anterior and posterior to, and behind the upper end of the sternocleidomastoid only. This rule had only one exception. In Case 7 the disease opened with chills, headache, pains in the abdomen, back, and sometimes vomiting. Complaints of some pain in the throat were present in all cases. In no case were the pains so severe as in a case of real tonsillitis.

The affection of the kidneys in this disease is rather striking. Among eleven cases three patients had acute hemorrhagic nephritis. The nephritis began in one case on the fifth day, in another on the seventh, and in the third on the eleventh day after all symptoms had disappeared and the glands had begun to get smaller. There is no other disease, except perhaps scarlatina, known in the course of which the kidneys become as severely involved as in this disease. Case 7 the patient had, besides small quantities of albumin, white and red blood cells and cubical epithelium in the urine. Traces of albumin were found in nearly all cases, even when the fever was low. The spleen and liver were somewhat enlarged in all cases, the spleen so much so that it was easily palpable, and the liver one inch below the ribs. Pain in the abdomen was a frequent complaint, and constipation a regular one. Adenoid vegetations were found in five of the cases. Characteristic for all cases was the lengthy duration of the swelling and the slow absorption. In three of the cases suppuration of the glands occurred. All cases were accompanied by fever, but in one case only did this reach as high as 105 degrees, while in the other cases it ranged between 100 and 104. It was a continual fever and disappeared by lysis.

The bacteriologic examination of the pus of three cases showed as follows: In one pure cultures of influenza bacilli, in the second influenza bacilli and streptococci, while in the last streptococci only were found. In Case 1 streptococci were found in the throat; in Case 3 influenza bacilli, diplococci and staphylococci; in Case 8 staphylococci and large diplococci; in Case 6 streptococci and diplococci.

The diseases had all the characteristics of an infectious disease, Cases 7, 8 and 9 would even justify one in calling the disease contagious. The prognosis is good in all cases. In Case 2 only, I felt uneasy for several days.

92 State Street.

A SIMPLIFIED HEAT METHOD OF STERILIZING AND STORING CATGUT.

WILLARD BARTLETT, A.M., M.D.

ST. LOUIS, MO.

So many prominent surgeons have adopted my suggestions for the preparation of catgut that I wish to describe methods which make the procedure vastly simpler in its application, and which at the same time remove any element of uncertainty regarding the results likely to be attained.

Catgut prepared according to this formula has been used by the Mayo brothers in almost 5,000 operations and has been adopted by such well-known surgeons as Drs. Burrell, Collins,

Cushing, Deaver, Finney, Frazier, Meyer and Murphy, as well as the men on the staff of the Massachusetts General Hospital and on that of the Pennsylvania Hospital and many others. This is a sufficient testimonial to the worth of the procedure, and I am more than certain that the present modification of it here described can not fail to attract new users.

As at present recommended very little time or trouble need be expended in carrying out the preparation of catgut. The materials used are exceedingly cheap, while the requisite apparatus, as shown in the accompanying illustration, is very crude and can be found in any hospital or in any physician's office.

The process can be divided into three steps: (1) The physical preparation of the material, (2) its sterilization, (3) its storage.

1. The ordinary commercial ten-foot catgut strand is divided into four equal lengths, each of which is made into a little coil about one and one-half inches in diameter. By twisting the last free end about four times around this little coil the latter will maintain its shape. These coils in any desired number (I usually take about 120 of them at a time) are strung on a thread like beads on a string in order that the whole number may be handled at once. This string of coils is hung in a metal can, better still in a beaker glass, but is not allowed to touch

the bottom or sides. I suspend them by carrying the two ends of thread through a small opening in a pasteboard cover, which is placed on the receptacle. The same opening serves to admit a thermometer, which is carried down to exactly the point where its mercury bulb is on a level with the topmost coils. Liquid petrolatum is now poured in, the quantity being sufficient to immerse the catgut and the bulb of the thermometer.

2. The vessel is set on a pan of sand, under which is placed a tiny gas flame of merely sufficient intensity to raise the temperature of the oil to 212 F. within from one to two hours. A little practice enables one to guess the size of flame necessary for this purpose. This is best done in the evening, and the temperature allowed to remain at about 212 F. (a few degrees variation does not matter) until morning. The heat is then increased to such an extent that the temperature will run up to 300 F. in an hour; the gas is then turned off and the temperature of the oil allowed to return to about 212 degrees.

3. The pasteboard cover, together with the string of catgut coils, is lifted off, the superfluous oil is allowed to drop off, and then the thread is cut, allowing the coils to drop into the following mixture:

Columbian spirits	100 parts
Todin flakes	1 part

1. "A Simple Heat Method of Sterilizing and Storing Catgut—Preliminary Report." Interstate Med. Jour.